The Journal of the Michigan State Medical Society

PUBLISHED UNDER THE DIRECTION OF THE COUNCIL

VOL. VII DETROIT, MICHIGAN, DECEMBER, 1908 No. 12

Original Articles

THE INFECTIVE POSSIBILITIES OF COW'S MILK*

COLLINS H. JOHNSTON, B. A., M. D.,
Pediatrician to Butterworth Hospital,
Grand Rapids.

There is no one article of food more important to the human race than milk. In health it is in universal use, and in disease it serves as the basis of dietetic treatment, while in the feeding of infants it is the one essential source of nourishment. The knowledge of the healthfulness of our milk supply is therefore of far reaching importance both to physicians and to the public, and deserves more attention and study than it has formerly received.

Heretofore our laws have required simply that milk should not be adulterated, and that it should contain a certain quantity of food constituents. Our legislators thought that as long as milk had not been skimmed or watered and contained a proper standard of solids and fats, we need not worry about the germs we eat and drink. But we now know that such diseases as scarlet fever, diphtheria, typhoid, cholera infantum, tuberculosis and many other infectious diseases are carried by unclean milk.

Two or three years ago I had a patient who was confined in one of the hospitals five months with fractures of both legs; he then developed typhoid fever and was seriously ill for five weeks. As the incubative period of typhoid fever is but one or two weeks, it is evident that he must have obtained his infection in the hospital. After the examinations I have recently made of the milk supply in our hospitals, I can readily see from what source he probably obtained his infection. In June of this year, I had a patient who went safely through a mild attack of typhoid. Two days later she was seized with all the symptoms of acute milk poisoning and became desperately ill, and although I took her to the hospital and resorted to every means known to save her life, she died in two weeks, a victim of impure milk.

It has come to be realized that the cleanliness of milk is a hundred fold more important than its food value. While milk poor in fat may mean a certain loss of nutriment to the one using it, its contamination with germs may be a matter of life and death to the consumer, particularly if an infant.

The tender mucous membranes of infants are exceedingly susceptible to the influence of bacteria and their products. Cholera infantum and summer com-

*Read in part before the trustees of the U. B. A. Hospital, Grand Rapids, Sept. 12, '08.

plaints are only other names for acute milk poisoning. Practically all cases of summer diarrhea in babies are caused by impure milk. The wonderful reduction in the death rate of infants in our large cities has been brought about by the recognition of this fact.

The growth of large numbers of germs in milk lessens its food value, because they remove nutriment, and alter the milk chemically. Ordinary market milk, which is overrun with germs, loses much of its value as food after it is 24 or 36 hours old. Practically all the trouble which arises from milk results from its contamination with bacteria.

If milk is heated to a temperature of 150 degrees for 20 minutes most of the germs are destroyed. This process is called pasteurization. Now no known process will make bad milk good milk, and when milk has deteriorated in quality, pasteurization cannot revivify it. Bad milk, whether heated or unheated, is unfit for feeding infants or sick people. But if we *must* depend upon old, contaminated, unclean milk, it is much better, especially in the summer months, to practice pasteurization in spite of its disadvantages. There are, however, certain grave objections to the pasteurization of milk. If it has been kept long before heating, poisons form in it which heat will sometimes not destroy. Milk thus heated is less digestible.

It is also generally accepted that babies will not long thrive as well on pasteurized milk as on clean, unheated milk, and occasionally that they develop malnutrition, anemia and scurvy. Thoroughly pasteurized milk also has a cooked taste, and cream does not rise readily from it, much of the fat remaining in the milk. Another great objection to the pasteurization of milk is that when the requirements for effective pasteurization are not observed, or the milk becomes infected afterwards by careless handling, organisms develop much more rapidly than in unheated milk; and strange to say such milk may become exceedingly poisonous while retaining its sweet taste and good appearance, owing to the fact that lactic acid organisms, which are usually the cause of the souring, are destroyed by heating. For instance, it has been found that the germs in raw and pasteurized milk containing respectively 1.260 and 12 bacteria, at the end of 72 hours increase to 17,000,000, and 148,000,000 in number. For this reason some authorities believe that pasteurized milk is not fit for consumption after a lapse of 24 hours, while some of the heated milk sold in this city is 72 hours old when used.

A mistake commonly made is in not keeping milk cool enough after it is delivered. If it is kept below 50° F., there is not only not an increase in the number of germs in it, but generally a decrease. The same holds good for milk kept 36 hours below 45°; germs do not usually grow at all below 40°. Freezing does not necessarily destroy them, as, for instance, the germs of typhoid fever have remained alive in ice for three months or over. But this temperature checks their growth, and many kinds are killed by it. Hence milk should always be kept at a temperature of 50° or lower. At a higher temperature the germs multiply rapidly, and the milk quickly sours and deteriorates. Milk containing but 3,000 germs to the cubic centimeter, if kept for 24 hours at 60°, holds 180,000 germs; if at 86°, 1,400,000.

While the mere fact that milk contains large numbers of germs is not a sure proof of unwholesomeness, the estimation of the number of germs in it is the best method we possess for determining its purity and healthfulness. Milk containing few bacteria contains few if any harmful varieties. Some of the market milk of Grand Rapids contains more germs than are usually found in sewage. For instance, the sewage of Boston has been found to contain 2,800,000 germs per c.c.

—that of London 2,000,000—Lawrence, Mass., 3,000,000—Westerville, Ohio, 2,300,000—Marion, Ohio, 239,000.

In an examination of the milk supplied to patients in our hospitals the past summer, I found a condition of affairs that should not long be tolerated. Four samples of milk obtained from one of the hospitals showed 7,650,000, 5,200,000, 15,090,000, and 27,250,000 bacteria respectively in a cubic centimeter (15 drops). The dairyman supplying this institution thought the milk might be contaminated in the hospital, so brought me two samples in sealed pint bottles, which contained 5,550,000 and 6,370,000 bacteria respectively to the c.c. The milk is brought to the hospital in large cans, instead of sealed bottles, which is wrong, and the temperature of the refrigerator is not kept low enough. For instance, a sample showing 5,200,000 bacteria to the c.c. as soon as delivered, contained 15,090,000 at the end of 24 hours in the refrigerator at a temperature of 56°. The ice-box temperature should be 45°—never above 50°. But one sample was obtained at a second hospital, which showed 10,300,000 bacteria to the c.c. To the credit of this institution be it said that all of its milk is obtained in sealed bottles which are kept in a refrigerator until used, there being no intervening ice-boxes on the floors. These boxes are very convenient for the nurses, but unless great care is taken the temperature in them is not kept low enough to check bacterial growth.

Another of the hospitals uses a certain company's pasteurized milk for which it pays 4½ cents a quart. If pasteurization is well done, and the milk properly handled afterwards, the bacterial count should be low. Five samples from this hospital showed the following counts —330,000, 210,000, 50,000, 28,250,000, and 3,870,000. The last sample was taken from a can in the refrigerator, one hour after delivery, temperature of milk, 60°. A sample of the same milk taken at my residence at the same hour, but delivered in a sealed bottle, showed 380,000 bacteria to the c.c.—showing the advisability of buying milk in bottles rather than cans. The milk with the count of 28,250,000 was obtained from a small ice-box on the second floor where milk is kept in a pitcher for the convenience of the nurses.

Each time milk is removed from the pitcher, it is infected by being stirred up with a spoon to avoid pouring off the cream. I have frequently found the temperature of this box 60° or 65°. One day it contained a piece of ice only five inches in diameter, and the doors were open.

The milk company referred to buys the most of its milk from a large number of producers scattered about the country, and does a large wholesale and retail business. After being passed through a separator to remove coarse particles of dirt, manure, insects, hairs, etc., the milk is heated momentarily to a temperature of 155° and cooled instantly to 37°. This is supposed to "pasteurize" it; but exposure to a temperature of 155° for such a short time is not sufficient to destroy all of the bacteria with which such milk is teeming. This is shown by the following report of Dr. M. J. Rosenau, director of the Hygienic Laboratory, Public Health and Marine Hospital Service, Washington, D. C., as contained in Bulletin 41:

Colonies per c.c.

BEFORE PASTEURIZATION.	AFTER PASTEURIZATION.
92,000	2,200
142,000	6,000
71,000	6,000
93,000	6,900
105,000	38,000
1,680,000	80,000
380,000	83,000
214,000	87,000
6,700	28,200

900,000	100,000
7,000,000	70,000
74,000	35,000

These milks were heated to a temperature of 163° to 165°.

The same variable results are to be observed in the samples taken from our hospital, and show the inefficiency and unreliability of the Flash Pasteurizer used. Milk to be thoroughly pasteurized should be heated to from 140° to 150° F., and maintained at that temperature for 20 minutes.

The beneficial results following efficient pasteurization have recently been shown in a striking and conclusive manner by Mr. Nathan Straus in Sandhausen, a village of 4,000 inhabitants in South Germany. "The death rate among children was very high there, and Mr. Straus was satisfied that this was due to the quality of the milk supply. He therefore made arrangements to pasteurize all the milk supplied to the inhabitants of the village. The experiment began on January 1, and the results have been most encouraging. In the first seven months of 1907 thirty children under one year of age died. In the first seven months of the present year, during which they have been supplied with pasteurized milk, only nine children died," a saving of twenty-one lives.

In a paper read before the International Congress on Tuberculosis in Washington September 30th, Dr. Alfred F. Hess, of New York, stated that of eight samples of commercially pasteurized milk recently examined by him, one was found to contain virulent "tubercle bacilli"—another illustration of the fact that "so-called commercial pasteurization cannot be relied upon for protection." Dr. David Bovaird, Jr., of New York, also read a paper calling attention to the fact that abdominal tuberculosis is much more frequent in Great Britain than in the United States, and attributed this to the corresponding preponderance of tuberculosis in the former country. An examination of the milk supply of Washington, D. C., last year showed that the milk from 11 per cent of the dairies supplying that city contained tubercle bacilli. Other investigations in recent years have shown that 5.2 to 55 per cent of the market milks in various parts of the world contain tubercle bacilli.

A. V. Melvin, D. V. S., chief of the United States Bureau of Animal Industry, Washington, D. C., in another interesting address stated that from a review of the statistics of the U. S. Federal Meat Inspection for the fiscal year ending June 30, 1908, covering 53,973,337 animals, or more than one-half of all those slaughtered for food in this country, and from the reports of tuberculin tests made in the fifteen years from 1893 to 1908, by federal, state and other officers on 400,000 cattle (mostly dairy cattle), it is concluded that 10% of the milch cows in the United States are affected with tuberculosis. As it is now generally admitted by scientists that tuberculosis in cattle is communicable to man and in particular to children, and as many cases of consumption in the adult are without question due to infection in childhood, it should be recognized by all sanitary authorities that the sale of milk from cows which have not been tuberculin tested or milk which has not been properly pasteurized, is a great menace to the public health, and should not be permitted.

The milk company supplying so-called pasteurized milk in this city also buys the output of a dairyman whose methods are much cleaner than the average farmer in the vicinity of Grand Rapids. This consists of about 50 gallons a day, for which the company pays four cents a quart. This milk is not subjected to heat. Forty gallons are bottled and sold for eight cents a quart. The other ten gallons are bottled, sealed with caps bearing the inscription, "Certified milk for the

nursery," and sold for 12 cents a quart. The milk is not "certified." Twelve samples examined by Dr. Wm. H. Veenboer, bacteriologist of the Milk Commission of the Kent County Medical Society, the past summer contained from 79,000 to 379,000 bacteria per cubic centimeter, the average being 203,000. The cows have not been tested with tuberculin.

This same milk company advertises to represent the Walker Gordon Laboratory in Grand Rapids. Such, however, is not the case, its license having been cancelled three years ago after a personal inspection of the company's methods by a representative of the Walker Gordon Co., since which time it has had absolutely no connection with the Walker-Gordon Co.

It must not be supposed that the milk supply of our hospitals is any more contaminated than that of the city at large. A sample of milk obtained at a prominent hotel was found to contain 6,320,000 bacteria to the c.c.—one from another hotel 3,290,000—one from a leading restaurant 10,300,000, etc.

Parks, one of our great authorities, says that milk containing over 50,000 to 100,000 bacteria per c.c. in 24 to 36 hours, should not be sold, and that any intelligent farmer can use sufficient cleanliness and apply sufficient cold, with almost no increase in expense, to supply such a product. Bitter, an authority on sanitary milk, maintains that the maximum limit for milk that is fit for use is 50,000 germs per c.c.

Recognizing the fact that a pure supply of milk for the city was desirable, the Kent County Medical Society last fall appointed a milk commission which after considerable labor succeeded in inducing a dairyman to produce certified milk. It was put on the market July 1st. Counts are made once or twice each week by our bacteriologist, Dr. Wm. H. Veenboer, and the maximum limit of 10,000 germs per c.c. permitted by the regulations of the commission has not yet been reached.

What then shall be done in Grand Rapids to secure a clean, healthful supply of milk? First—Every cow supplying milk to this city should be tuberculin tested and proven to be free from tuberculosis. The last session of the legislature passed a law empowering the Board of Health to make these examinations, and between 500 and 600 of the 4,000 cows whose milk is used in this city have undergone the tuberculin test. Second, The common council should aim to establish a legal standard for the bacteriological content of milk, which would have a much more important bearing upon the public health than our present chemical standards. This has been done already in several cities, Boston having a standard of 500,000 bacteria to the c.c., and Rochester 100,000. Milk not reaching the legal standard should be pasteurized, and this should be done under the immediate and constant supervision of the health officer. The ordinary tests for fat, total solids and specific gravity are valuable, but affect principally the pocketbook. The healthfulness of the milk is not revealed by these tests.

Miss Louisa T. Blackburn of the bacteriological laboratory of the N. Y. City Board of Health, who made these counts for me, examined three samples of certified milk and found 1,800 bacteria per c.c. in the first, 200 in the second, and 500 in the third which was 36 hours old at the time. When we have such milk at our disposal, which does not need heating, we have no moral right to feed invalids in any of our hospitals such milk as they are receiving today.

Twenty-five per cent of the total daily milk supplied to the city of New York is pasteurized, and about one-third of Boston's supply. In Berlin, Paris, and many other European cities much of the milk is now pasteurized.

Third—The public must be educated.

When people recognize the fact that pure clean milk cannot be produced for six cents a quart, and demand a wholesome quality, even if eight or ten cents must be paid for it, it will be forthcoming on the part of a good many dairymen, instead of being confined to one, as at present.

Legislation alone cannot give a municipality good milk. Quality and cleanliness must to a great extent regulate its price, and the incessant care and attention necessary for the production of clean milk must be paid for. People would be more ready to do this, I think, if they realized more clearly its great food value, and that all things considered milk is one of the most economical of all foods. For instance, one quart of fresh milk is equal in food value, approximately, to one pound of fresh lean loin of beef (the retail price of which is 15 cents), three-fourths of a pound of lean round steak (12 cents), one pound of veal (16 to 22 cents), one pound of sweetsbreads (35 to 50 cents), three-fourths of a pound of dried beef (24 cents), three pounds of fresh solid oysters (75 cents), eight large or nine small eggs (18 cents), sixteen quarts of beef broth, four quarts of beef juice, or seven quarts of cereal water (oatmeal, barley or rice). Few people realize the insignificant food value of beef tea or beef broth, however made.

The cost of milk diet to a hospital is considerably less than any other diet.

I do not know the cost of food per patient per day in your hospital, but the most economical as well as the most scientifically constructed dietary at present used in this country is probably that of the annex to the Loomis Sanitarium, at Liberty, N. Y. After an exhaustive study of the nutritive properties of all sorts of foods as expressed by calories, the universally recognized unit of measure of food values, and knowing the proper amounts of proteids, fats and carbohydrates necessary to adequately nourish an individual, Dr. Herbert M. King, physician in charge, has arranged a dietary which in its essential requirements is much superior to that formerly used and which has reduced the cost of raw food from 38 or 40 cents per patient per day to 26 or 27 cents per day. When it is considered that the cost of food per patient in an institution is always doubled and sometimes trebled by the expense of cooking and serving it (the waste alone of digestible and assimilable food in the kitchen and dining-room amounting to from 15% to 50%), and that few patients on a milk diet take more than two quarts a day (a very few may take three quarts), the economy of milk, which is usually consumed raw, as an article of food must be apparent.

There are more grades or qualities of milk on the market today than of eggs or meat; and if you are careful to buy only fresh eggs and fresh, tender meats for your patients, why not exercise equal care and discrimination in buying your milk?

DIET IN GYNECOLOGY

J. H. KELLOGG, M. D.,
Superintendent of the Battle Creek Sanitarium.

No class of specialists in medicine and surgery have more assiduously or more fruitfully cultivated the special field allotted them than have gynecologists, and in no specialty has there been greater progress and development than in this. Every other branch of scientific medicine has contributed something either to the etiology, the pathology, or the therapeutics of gynecology. The facts contributed by bacteriology and the radical aid rendered by abdominal surgery have saved, not thousands only, but in the aggregate, millions of women. It is barely possible, however, that the contemplation of the brilliant triumphs of surgery and the riddle-solving discoveries of bacteriology as related to the diseases of women may have to a certain degree eclipsed some of the less sensational although perhaps equally useful advances which have been made in other departments.

It is the aim of this paper to point out some of the lessons which may be gathered from the more recent progress in dietetics and to show that not a small proportion of the distressing symptoms and special ailments from which women suffer and with which the gynecologist is called upon to deal are not the result of any essential disorder of the organs peculiar to women, but are due instead to a faulty regimen; and that these symptoms and ailments may be relieved and removed by proper regulation of the dietary and of the nutritive functions.

The classes of disorders with which the paper will especially deal are:

1. Those in which the patients recite the usual category of distressing symptoms in the region of the pelvis—those of pain, backache, sideache, legache, dragging sensations, etc., but in which careful examination reveals no physical evidence of disease of the pelvic organs.

2. Those in which physical evidence of disease co-exists with the various subjective symptoms relating to the pelvic region, such as endometritis, parametritis, leucorrhea, displacements of the uterus or ovaries, acute and chronic infections of the Fallopian tubes, etc.

3. Cases in which the patients present various remote or general symptoms which are usually attributed to the reflex influence of morbid conditions of pelvic viscera such as prolapse of the uterus or ovaries, retroversion, laceration of the cervix, endometritis, ovaritis with erosion of the cervix, etc., with or without local subjective symptoms.

Every gynecologist has encountered many illustrations of the first class of cases in which without any physical evidence whatever of pelvic disease, the patient complains bitterly of symptoms which are commonly attributed to disorder of the pelvic viscera. Such patients are often very hard to convince that no local disease exists, and that no local treatment is required. Not infre-

quently the patients become possessed of the idea that a surgical operation is required, that the uterus or the ovaries must be removed, the cervix or perineum operated upon, a curettage performed, or some operation done which is supposed to be the means by which some friend found relief from similar symtoms. Not infrequently such patients have for years drifted about from one gynecologist to another, finding, now and then, temporary relief through suggestion, but always drifting back into worse conditions. If the gynecologists refuse to operate or to administer local treatment, the patient usually sets out in search for some physician who will accept her theory and institute a course of treatment in harmony therewith.

The motives which lead a gynecologist to meet the wishes of such a case are not necessarily commercial, though they may be. There may, indeed, be a sincere purpose to lead the patient to recovery through suggestion, though the means adopted can not be considered wise or scientific; or the motives may be mixed. In any case such a patient usually finds some one who is willing to administer the treatment she desires, and so she goes on year after year, constantly in the hands of one specialist or another until perhaps she finally reaches the climacteric. Then she is told her troubles are due to the change of life and is assured that when the change is completed she will be relieved. Unfortunately, however, in this she is disappointed. Cessation of the menstrual period brings no relief. The symptoms even become more aggravated as senility appears. In the early years of my practice I was not a little puzzled with these cases, and it was not until after I noted that many of the symptoms of which patients of this class complain were identical with the symptoms mentioned by certain classes of men patients, that I began to appreciate that I must look elsewhere for the cause. The writings of Glenard, Levin, Dujardin-Beaumetz and other French authorities opened my eyes to the great and widespread influence of the abdominal sympathetic and especially to the three great sympathetic centers, the right, left, and sub-umbilical ganglia.

In recent years Mayo Robson and Moynihan have called attention to referred pain and tenderness in the back as a symptom of gall-bladder disease. This is a reflex in which the initial irritation is experienced by the sympathetic nerves and transmitted through the sympathetic centers to the sensory nerves of the cerebro-spinal system. This effect may be produced no matter what centers are irritated, no matter what the source of the irritation, whether an inflammatory condition in a viscus or the circulation of irritating toxins in the blood. The umbilical ganglia are to an extraordinary degree exposed to irritations of both sorts. Branches of sympathetic nerves from these ganglia are distributed to the colon and small intestine and other abdominal viscera as well as to the pelvic organs; hence the ganglia may be irritated by morbid states of the intestine, especially the colon, as well as morbid conditions of the pelvic viscera. This explains the fact that a woman may have many of the subjective symptoms which accompany a non-inflammatory disease of the pelvic organs with no lesion of these organs of any sort. In cases of the sort under consideration, the hypersensitive and irritated condition of the abdominal sympathetic may always be demonstrated by making deep pressure about two inches on either side of the umbilicus and the same distance below it. The patient lies upon the back with the knees flexed, the abdominal muscles relaxed, while the pressure is directed toward the spinal column. An elliptical sensitive spot about two inches in length and three-quarters of an inch

in width may be easily located on either side of the umbilicus, and about two inches below it. Not infrequently when pressure is made upon one of the umbilical ganglia, the patient will experience a pain in the back, the groin, or the leg, and immediately recognize a familiar symptom. In my experience it is a common thing for the patient to exclaim, "Why, doctor, that is the very pain from which I suffer so much." The fact that the pain has been located and reproduced is often a good foundation upon which to build confidence on the part of the patient that the cause may be removed, and the cause is the thing in which the intelligent and practical physician as well as the intelligent patient will be interested.

The treatment of symptoms is necessary and rational, but to confine one's therapeutic endeavor to the treatment of symptoms alone is rank empiricism and is irrational; hence the importance of searching thoroughly for the cause of the sympathetic nerve irritation which is the real source of most of the subjective symptoms from which these patients suffer.

These causes are numerous. Among the most frequent of these causes of sympathetic irritation is enteroptosis. A prolapsed and pendant condition of the bowels, especially the colon, puts the sympathetic nerves which reach the bowels through the mesentery upon a stretch, causing a painful tension which is especially pronounced whenever the patient assumes a perpendicular position. This prolapsed condition of the intestines and of other viscera which are usually associated in the prolapse is a natural result of conditions to which the average civilized woman is subjected. The sedentary life, especially the sitting position, and rocking-chair sitting in particular, results in a weakened and atonic condition of the abdominal walls so that the natural support of the abdominal organs is lost. In the majority of adult women, the abdominal walls are flaccid, wholly lacking in tone, and the lower abdomen bulging, and the colon and other viscera lying at levels from two to seven inches below the normal. Lack of exercise contributes to this muscular weakness as does also the unnatural mode of dress to which civilized women subject themselves, particularly in the wearing of rigid corsets and tight waistbands.

Careful determination of the position of the viscera in several thousand women has fully convinced me that enteroptosis exists in at least nineteen twentieths of all women who consult the gynecologist. The more recent methods of locating the viscera, particularly the location of the colon and the stomach by means of the Roentgen ray and bismuth fully confirm the earlier observations which I made and the results of which I have reported in various papers read before this society and the American Medical Association.

For the demonstration of enteroptosis the examination of the patient must be made in the standing position. In this position it is easy to demonstrate the prolapsed condition of the stomach by causing the patient to lift the prolapsed organ back into position by raising the chest and contracting the abdominal muscles. The stomach may be seen to be carried upward by this maneuver from two to seven inches. These patients have often themselves recognized the cause of their suffering, and not infrequently remark, "Doctor, whenever I am on my feet I have such a dragging sensation across the lower abdomen that I feel as though I must hold myself up." The application of a proper abdominal supporter in these cases not only affords the patient grateful relief, but demonstrates the source of the patient's suffering to be the cause above referred to.

There are other causes of enteroptosis

than bad pressure in sitting, incorrect dress, and the deficient development of the abdominal muscles. Certainly one of the most common of all causes is chronic constipation. Foodstuffs normally require seven hours in passing from the stomach to the colon. The digested food products remain for fourteen hours in the cecum and ascending colon. An additional three hours is required to complete the transit of the alimentary canal. When the daily discharge of undigested food remnants and intestinal excretory products is omitted, there is an excessive accumulation in the colon. The overloading begins in the cecum. There is an abnormal drag upon the hepatic flexure of the colon which at first gives rise to backaches, sideaches, and later results in displacements of the right flexure, and through the connection of the colon with the kidney the latter organ is also dragged out of place and becomes movable or even floating. The retained fecal matters give rise to fermentation which likewise distends the colon in all directions. It is not only enlarged in its transverse diameter, but it is elongated. The elongation of the transverse colon leads to the prolapse of this part of the bowel without necessarily loosening the bowel at its hepatic and splenic flexures.

In operations requiring abdominal section, I have often found the transverse colon lying very low in the pelvis. A loop is often formed in the sigmoid portion of the colon. All of these distended portions of the bowel, when filled with fecal matter, as is almost universally the case in chronic constipation, drag upon the umbilical ganglia of the sympathetic and thus become a prolific source of referred pains which lead the patient to believe that she is suffering from pelvic disease, and too often mislead the practitioner in the same direction.

For nearly twenty years I have made it my practice to begin my examination of every case supposed to be suffering from chronic pelvic disease by careful location of the upper abdominal viscera and examination of the abdominal muscles and the abdominal sympathetic. My statistics show that static disturbance of the abdominal viscera can be demonstrated in nearly all cases of chronic pelvic disorder, with the partial exception of cases resulting from the sequellæ of acute pelvic inflammations.

Indigestion in its varied forms, and the causes of these disorders as well as those above mentioned, must receive due consideration if these cases are to be benefited by our therapeutic efforts. Dietetic regulation in cases of this sort is a measure of first importance. The patient must be instructed to masticate thoroughly each morsel of food. Half-baked bread, mushes and imperfectly cooked cereals of all kinds which form hard, irritating masses in the bowel and are a prolific source of intestinal mischief, must be prohibited. A high protein or rich meat diet must also be prohibited. An abundance of fresh fruits and fresh green vegetables is of great importance, not only in regulating the bowels but as a means of opposing putrefactive processes in the intestine.

In cases of the second class, in which physical evidences of pelvic disease coexist with subjective symptoms, nutritive disorders are often a dominant factor through the lowered vital resistance which necessarily co-exists with both metabolic and intestinal autointoxications. Saturation of the system with the imperfectly oxidised products of proteid metabolism produces a condition of lowered resistance which opens the door to the invasion of infective micro-organisms of various sorts.

Every physician knows the importance of withholding flesh foods in the presence of acute infections of all sorts. This fact is based upon the unequivocal teach-

ing of experience. Roger has recently made a list of nearly eighty pathogenic organisms which have been found growing in the small intestine. All of these are invading parasitic bacteria. The normal flora of the intestine consists exclusively of harmless, acid-forming bacteria which act in a protective way by occupying the field and rendering the intestinal fluids inhospitable to the pathogenic, toxin-forming organisms. A high protein diet, as has been pointed out, encourages the growth of these organisms as evidenced by the putrid stools of the carnivorous animal and the user of large quantities of meat. In a patient whose colon is habitually laden with putrefactive material, the susceptibility to infection by pus-forming and other organisms is greatly increased, and at the same time the bowel itself is an incubating chamber in which various pus-forming organisms are developed in vast numbers. It has been demonstrated by various investigators that these organisms are constantly passing through the intestinal walls in great numbers. It is only because a constant battle is waged against these invading organisms by the leucocytes of that great lymph sac, the peritoneal cavity, and by the omentum, that peritonitis, salpingitis and other infections are averted. It is only necessary, however, that the virulence of the invading organisms should be increased or that the resistance of the body should be still further reduced to initiate an active infective process which may develop into a peritonitis, a salpingitis, a parametritis, an endometritis or some other acute inflammatory process. Or, instead, a gradual lowering of the vital resistance may lead to a gradual infection of the genital tract by micro-organisms resulting in a vaginal or cervical catarrh, and chronic endometritis, or a catarrhal inflammation of the Fallopian tubes. These conditions are not, in the writer's opinion, the result of accidental infections, but are due to the gradual lessening of the resistance of the tissues through the long continued action of erroneous habits of life, chiefly dietetic errors of the sort referred to.

It is almost a routine practice with many an experienced physician to begin the treatment of these cases by what was formerly termed an "opening purge" such as a dose of salts or calomel, or the two in combination, to unload the portal circulation. The rationality of this practice was not good, but the results were usually excellent. Calomel and salts do not unload the portal circulation, but they do unload the bowels. Calomel is a very effective intestinal antiseptic, and saline laxatives clear the intestines of undigested masses of decomposing flesh and billions of virulent bacteria, thus rendering the body material aid in its battle against invading bacterial and paralyzing poisons.

The third class of cases, in which there may be local physical symptoms such as uterine or ovarian displacements, cervical or perineal tears, etc., without local or subjective symptoms but with co-existing remote or general morbid conditions such as headache, nervousness, emaciation, pigmentation of the skin, neurasthenia, etc., affords opportunity for the greatest triumphs in the application of the principles of modern medical dietetics. At the same time, this is a class of disorders in which, in the writer's opinion, there is more unnecessary gynecological practice, and especially unnecessary gynecological surgery, than in any other. The teaching of Emmett and others of his school which attributed to slight cervical and perineal tears, small or large cicatrices in these regions, and like lesions, such disorders as those referred to, has in the writer's opinion little foundation in fact. Those who promulgated these views were led astray by their ignorance

of the real causes of the symptoms and conditions referred to.

These patients are not infrequently relieved by operations upon the cervix or perineum, but the relief is not due to the removal of the lesion supposed to be the etiological factor in the case, but rather to the rest in bed, the salutary clearing out of the alimentary canal, the withholding of flesh foods from the dietary, and sometimes doubtless to the potent influence of suggestion. Even greater benefits might have been obtained in many cases treated thus surgically, by purgation, dieting, rest, etc., without the surgical procedure.

It is certainly a serious mistake to subject a woman to the hazard of a gynecological operation, light though it may be, and the accompanying pain and inconvenience, when relief can be obtained by other means; especially as the relief obtained by operation, in cases of the class referred to, is rarely more than temporary. The real cause in the great majority of cases is chronic intestinal auto-intoxication. This is clearly shown by the coated tongue, bad breath, and especially by the presence of quite large quantities of indol and putrefactive bacteria in the feces and of indican in the urine. In not a few of these cases there is present substantial evidence of an infected state of the colon in the discharge of great quantities of mucus.

Many cases of so-called pseudo-membraneous enteritis or colitis are found in this class of patients, and the mistake is sometimes made of attributing the bowel disorder to some perverse reflex from a torn cervix or perineum. Bad cervical tears accompanied by endometritis and erosions are proper subjects for operation, but the custom still prevalent with some surgeons of operating on every slight (old) tear of the perineum or cervix is certainly unnecessary and most reprehensible.

Having demonstrated the inadequacy of gynecological operations for the relief of these cases, and recognizing the intestinal toxemia as a prominent factor, an eminent London surgeon has devised and enthusiastically advocates the radical procedure of removing the greater part of the colon. Fortunately, the magnitude of this operation, and the death-rate until the present time, are such as to deter many surgeons from following the illustrious example of the surgeon referred to. In the writer's opinion, the good results obtained by Dr. Lane may be secured by the adoption of thoroughgoing antitoxic dietary and other non-surgical measures of treatment.

The dietetic treatment of the three classes of cases mentioned is essentially the same. It is most essential to place the patient upon an antitoxic dietary and regimen. The bill of fare must be balanced, and care taken to reduce the protein to the lowest limit which will satisfy the body needs. The proportion of proteins should be not more than ten per cent of the total number of calories in the daily ration. Meats must be used very sparingly indeed, and it is much better to discard them entirely. There is no difficulty in doing this when proper care is taken to supply the patient with a varied and properly proportioned bill of fare. Animal fats must be used sparingly, as Combe and others have shown that they encourage toxic conditions of the intestine. Fruits, fresh vegetables, well-cooked whole grain cereals, must constitute the main features of the diet. The yolks of eggs may be used sparingly, but the whites of eggs, especially when hard boiled, should be discarded as they are never sufficiently masticated. Food must be thoroughly masticated so as to avoid excessive delay in the stomach and to lessen the amount of undigested and putrescible residue. Food should be sufficiently bulky to stimulate active peristalsis. The bowels should move twice daily. The use of buttermilk, or of Bul-

garian milk preparations made from maya, the ferment used in the preparation of yabworth, is especially to be recommended. When the milk preparation can not be obtained, the ferment may be used instead, prepared in the form of a dry powder in capsules or tablets prepared as suggested by Metchnikoff. Lactic acid-forming ferments are all very serviceable in these cases by creating an acid condition of the intestinal fluids which hinders the growth and development of the putrefactive anaerobes.

It is well, at least in the beginning of treatment, to empty the colon by enema two or three times a week to make sure that there is no stasis in this part of the intestine. Thorough-going antitoxic measures should be instituted until the stools are no longer putrid. Great advantage may be obtained by the bacteriological and chemical examination of the feces and the estimation of indican in the urine. It is most satisfactory to see the rapid decline in the number of putrefactive bacteria and in the quantity of indol and other putrefaction products in the feces as well as of the amount of indican in the urine under the influence of an antitoxic diet.

The experiments of Combe show that rice prepared in the ordinary way, is the most antitoxic of all the cereals. Malted cereals are, according to Combe, also highly antitoxic. The same is true of fruits, especially of sweet fruits, which encourage the growth of the friendly, lactic acid-forming ferments. Animal fats encourage the development of toxins. Vegetable fats are, on this account, much preferable. Under the influence of such a dietary, the pigmentation disappears from the skin, the patient gains in weight, headaches disappear, the tongue clears, the breath becomes sweet, the perspiration is no longer malodorous, the stools lose their putrid character, the indol and indican diminish, and finally disappear from the feces, and the urine; nervous symptoms which have resisted all sorts of medicinal remedies likewise disappear, and often in a few weeks or months, as the case may require, complete recovery occurs in cases in which a variety of severe and sometimes very hazardous surgical procedures have been urgently advised. It is the writer's opinion that regulation of the bowels and the digestive and nutritive functions by proper regulation of the diet and treatment addressed to these functions are matters of primary importance in the treatment of gynecological cases, and that whatever other measures may be adopted, these should never be omitted.

It is not, of course, the purpose of this paper to decry necessary or justifiable treatment, either medical or surgical, but rather to urge the more assiduous and exact application of non-surgical means so far as they may be found to be applicable; and it is hoped that some of the measures suggested may be considered worthy of consideration and trial.

If time and space permitted I should be glad to append the brief notes of a number of cases which illustrate the points made in this paper. I will omit the reading of these reports, however, only remarking that they, with notes of other similar cases which I might adduce, fully justify and substantiate the statements above made.

NEGLECTED FIELDS IN MEDICINE

WILLIS S. ANDERSON, M. D.,
Laryngologist to Harper Hospital,
Detroit.

As the science and art of medicine have developed there have come into prominence at different periods, various theories, born of dissatisfaction, nourished by superstition, living as a rebuke to the existing conditions, dying perhaps, but leaving their imprint upon the thought and practice of our art.

About sixty-five years ago, Doctor Oliver Wendell Holmes, in a public lecture delivered before the Boston Society for the Diffusion of Useful Knowledge, considered some of the medical delusions which illustrate the childlike credulity of mankind, on subjects pertaining to medicine. His study of the theories and the practice of the homeopathic sect is an interesting analysis of the fallacies of that school. Time has undoubtedly softened the feeling towards homeopathic ideas, but more than a hundred years of scientific investigation have failed to prove a single one of their so-called laws. There are today very few in that school that have much faith in Hahneman's theories, if we are to judge from their practice.

Christian science and osteopathy are two sects, which have sprung into existence within recent years, whose extravagant claims for their healing powers far exceed the truth. There are other systems of practice, which can hardly be called schools, that have many votaries: such as, vegetarianism, hydrotherapy,, electrotherapy, massage, exercise, the various froms of light treatment and many others. The enthusiastic follower sees in each an almost universal panacea for human ills, while the regular physician too often sneers at their claims and results. We all realize that the most unreasonable and fantastic theories have their devotees, and that some are always ready to testify to the value of any method.

While these side-lines of medicine are too often in the hands of ignorant and unprincipled practitioners, we must admit that they succeed, many times, where others fail. If the regular profession were as alert and as intelligent as they should be, these practitioners of exclusive systems would find little to do. We might almost say that "quackery" thrives on the indifference and ignorance of the profession. Much as we condemn the extravagant claims made for these medical dogmas, we must admit that each has contributed a grain and in some instances many grains, to our stock of knowledge. It is for our interest to appropriate anything of value which these systems possess, and to ascertain why we fail when others succeed.

Homeopathy was a rebuke against the crude and severe practices of the older school. The frequent bleeding, and the large doses of nauseating and powerful drugs did positive harm. Homeopathy taught us to respect the reparative processes of nature.

Christian science is the gospel of cheerfulness and of hope. Though we

condemn its practices, we must admit that many an irritable, nervous, and pessimistic individual has had his whole life changed for the better by this simple and optimistic doctrine. The large following which this sect has depends upon a belief in the powerful influence of the mind over the body.

The use of mental therapeutics is not new. The pagans and semi-civilized tribes have invoked for centuries the aid of their deities in the healing of the sick. Many Catholics today visit the shrines of the saints to find relief from physical infirmities. We all realize that many functional nervous diseases are the result of the individual being out of harmony with his social surroundings. The strenuous life, business and family cares, social duties and religious impulses are some of the causes that produce worry, nervous breakdown and mental disease, in those with ill-balanced nervous systems. These nervous conditions usually interfere with nutrition, and predispose, at least, to bodily disease.

Such nervous patients need advice, not medicine. We should attempt to change the whole tenor of their thoughts by suggesting new avenues of mental activity, by making them worry less over family or business difficulties, by interesting them in some out-of-door game, by encouraging a hobby that brings pleasure and recreation; thus perhaps the whole attitude of the patient toward life may be changed, and his bodily functions improved. Recently in Boston, and then in other cities, a serious attempt has been made to offer the services of religion as an aid to the physician, in the relief of certain functional diseases.

We need to bring more of this scientific spirit into our medical work. By the scientific spirit as applied to medicine, I do not mean that all of our patients are to be studied and treated by the rigorous laws and methods commonly employed by the laboratory worker, but by close observation and the application of well known facts, we should do less guessing and base our opinions upon knowledge.

The greatest advances in medicine, during the last quarter of a century, have been along lines of prophylaxis and etiology. The fundamental principles of medicine are to be found in the study of anatomy, physiology, chemistry and pathology; still but a small proportion of our profession systematically study these branches after graduation. The advances in physiology, for instance, during the last two decades have been such as to modify greatly our views, yet the library of a physician in practice twenty-five years seldom contains a physiology of recent date. It is the same with the other fundamental branches.

Advice upon the broad principles of hygiene is commonly overlooked by the physician. When I was in general practice, and especially when I was intubating city cases, I often noted the prevalence of throat affections in the homes situated upon unpaved streets, and in houses without a foundation. The same is true of clinic cases. It has been found that the infectious diseases, including tuberculosis, are more common among those living upon unpaved streets, and in the midst of unsanitary surroundings. I have often observed chronic sore throats, or frequent acute attacks, in several members of the same family, which seemed to be dependent upon the condition of their homes. Investigation would often show water standing under the house, putrid with organic matter. Adenoids removed from children of the poorer classes more often recur than in those children who live under better hygienic conditions. Individuals living under unsanitary conditions are often below par, although no definite disease is discernible. Physicians can do a great deal

to lessen the danger of disease by advice regarding sanitation. Simple practical instruction can be given that will frequently enable a householder, at a very little expense, to make his home healthful. The co-operation of the health officer will often bring results where we alone would fail.

The proper heating and the ventilation of houses is too often neglected. I doubt if attention enough has been given to the injurious effects of breathing baked air. We know the value of fresh foods and fresh water, as compared with cooked foods and boiled water. We also know that sterilized, and even Pasteurized milk, is not as wholesome as pure, fresh milk. Is it not reasonable to believe that the baking of air over the hot drum of a furnace, or coils of steam pipes, may take the vitality out of the air, thus lessening its value for respiratory purposes? The average house is over-heated and poorly ventilated.

This brings us to a consideration of the value of fresh air, sunlight and the advantages of different climates in the prevention and the treatment of disease. The open air treatment of tuberculosis has done much to educate the public and medical profession to the value of living out of doors. We would do well to advise the healthy, as well as the sick, to follow such a life.

It is a pity that physicians have not more definite ideas about the climatic treatment of disease. Either through thoughtlessness, or ignorance, many a tubercular patient is sent west, by his physician, only to find conditions very much worse than at home. For the average patient the difficulty of obtaining proper food, wholesome water and congenial surroundings, at a reasonable cost, more than counterbalance any advantage which the climate can offer.

The composition of the atmosphere in all parts of the world is essentially the same. The varying factors in the air of different localities are the amount of dust, both organic and inorganic; the amount of moisture, that is, the humidity; and the rarity of the atmosphere, which is in direct proportion to the altitude. Besides these factors we have to consider the amount of sunshine, the temperature and the prevailing winds. A climate that allows a patient to be outside most of the time has an advantage over one that makes this unpleasant, but crude, or unhygienic surroundings, may outweigh this factor. The treatment of tuberculosis has demonstrated that an out of door life in this section is beneficial, and that it is not necessary to send a patient to another climate for pure air and the stimulating effects of oxygen. We forget that the benefit which seems to result from a change of climate is due often to a change of habits, and that if a patient could be induced to pursue a more sane method of life at home, by spending practically all of his time in the open air, he would receive the same benefit that a change of climate gives. The value of fresh air applies not only to chronic diseases, but to acute medical and surgical cases as well. Perhaps the greatest advance in the treatment of pneumonia, in recent years, has been an appreciation of the value of placing the patient in the fresh air. The temperature and restlessness are lessened, the breathing made slower and deeper, and a general improvement results. It is said that surgical cases do much better if the convalescence takes place in the open air.

Another neglected field is the matter of diet. Every patient with an acute disease, and the majority of chronic cases, ought to have a diet outlined. It is not sufficient to say, "Take a soft diet," or "Eat foods that are easily digested." We should be more specific. In order to give definite advice, we should have a clear idea what is the relative worth of the principal foods,

both from the standpoint of the nutritive value and the ease of digestion. The observations of Chittenden as summed up in his work, "The Nutrition of Man," have changed somewhat our ideas as to the amount of proteid necessary for an average individual. Perhaps it is too early to accept all of his conclusions, but we have known for a long time that the average American eats too much. If experience proves that we do not need as much proteid as was formerly thought necessary, it will be a great advance, both from the standpoint of health and economy.

We are indebted to a layman, Fletcher, for telling us what we knew in a general way, that the slow and thorough mastication of food greatly adds to the ease of digestion and assimilation, and at the same time makes comparatively tasteless foods palatable. His individual experience has been that with a smaller quantity of food, thoroughly masticated, he has increased his endurance for physical and mental work to a remarkable degree. All this has been done without systematic training, and on no special diet. He eats what he wants, when he feels hungry, and all he wishes, observing only the rule, to eat slowly and to masticate thoroughly his food. His observations on himself have been confirmed by a number of capable physiologists. It is possible that Fletcher from his own personal experience has drawn too sweeping conclusions. Experiments carried on at Yale, and other universities, have shown however that his statements are in a general way true.

Hydro-therapy has a well recognized place in the treatment of disease, yet seldom is it seriously considered by the average physician. The tonic effect of a morning cold bath, or spongings, is an important prophylactic measure against colds. Tired and aching limbs are refreshed by a warm bath. Insomnia is sometimes relieved by a warm bath, followed by a cold douche down the spine. The safest and most reliable measure for the reduction of fever is the use of the cold bath, pack, or spongings. It should replace the use of the dangerous coal-tar antipyretics in nearly every instance. In chronic rheumatism, alcoholism, obesity, or in any condition where elimination is desirable baths are of value. They have a place in the treatment of nervous and mental diseases to such an extent that private and public institutions are equipped with the necessary apparatus for the skillful application of the various forms of baths.

The electric and mud baths, and the various forms of light treatment should be considered in this connection. While recognizing the value of baths we should realize the danger from their use in certain diseases. Baths are too often given without proper medical supervision. Before patients submit to the use of baths for the treatment of disease, an examination and working diagnosis should be made in every instance. Many sudden deaths in the bath have been reported, that could have been avoided if the condition of the patient's heart and other organs had been known.

We ought to have a clearer idea of the usefulness and limitations of massage, exercise and electricity. While the osteopathic practitioner claims that his practice in no way resembles massage, most unprejudiced observers see in the good results of the method a stimulation of the circulation of the part closely allied to the benefits obtained from the use of massage. Regular exercise, especially if it be pleasurable, gives tone to the body, stimulates the circulation, and rests the mind. If physicians would call in oftener a competent masseur, in suitable cases, we should have fewer patients leave us for the osteopath.

In the field of orthopedics a very important advance in recent years is the better understanding of the value of sys-

tematic exercise in the correction of deformities. Even in laryngology massage has a place. There are patients, usually those who have occasion to use their voices in a professional way, who have voice defects from muscle tire. Singers and teachers whose voices become tired or husky after use, are often benefited by massage over the larynx and pharynx. It is necessary in these cases to exclude obstructive and inflammatory lesions.

Perhaps no agent has been used more to humbug the public than electricity. In the hands of the quack it has been employed for most every disease that flesh is heir to, and physicians too often use it promiscuously without adequate conception of its value or limitations. As a diagnostic measure in nervous diseases, it is very valuable. Most careful observers agree that its use as a therapeutic agent is very limited. It will stimulate the circulation, and through the nerve trunks improve the nutrition of the muscles. There is little evidence to show that the effect of electricity is greater than the use of exercise and massage, or certain drugs which have a selective action upon the nervous system.

Perhaps the impression will be gained from the above, that I am in favor of most every method except the use of drugs. On the contrary I am a firm believer in the value of drugs properly used in the treatment of disease, but no branch of medicine is more inadequately taught than the therapeutic use of drugs. In a recent number of the *Journal of the American Medical Association,* Mr. Bok, editor of the *Ladies' Home Journal,* severely criticises the medical profession for using preparations of drugs of which little or nothing is known of their composition. He rightly condemns the practice, which employs proprietary preparations and relies upon the statements of the manufacturer as to their action and composition. In the main I believe that his criticisms are just and well founded.

Biology and bacteriology for a time engrossed the attention of laboratory workers to the neglect of the study of purely chemical processes. A practical knowledge of the recent advances in chemistry will throw considerable light on physiologic processes, and will give valuable hints as to the value of chemical agents in therapeutics.

An article by Starling, on "The Chemical Control of the Body," contains many suggestions of practical value. He reminds us of the division, which Ehrlich made, of chemical agents that act upon the body, into toxins and drugs. He calls attention to the specific action which toxins and drugs have on the different tissues of the body. For instance, the toxin of diphtheria will produce certain definite symptoms, the toxin of tetanus, and the drug strychnine both have a selective action on the nervous system. As we learn more about the action of individual drugs we appreciate that each has its special action.

Our knowledge is very incomplete as to the action and nature of many of the internal secretions, but we know that they are chemical in nature, and each in turn has its special function. The relation of the thyroid to the metabolism of the body is well known, and its causative relation to certain diseases; such as, cretinism and exophthalmic goitre, is well recognized. As an excellent illustration of the practical possibilities to be derived from pure scientific research is our increasing knowledge of the action of adrenalin. Balfour has shown that the supra-renal glands have a twofold origin: the cortex being derived from mesoblastic tissue, while the medulla is formed by a direct outgrowth from the sympathetic system, and first consists of an aggregation of neuroblasts. The active principle of the gland is from the medulla, and Starling nicely points out that the action of adrenalin can be explained best by its stimulating effect

upon the sympathetic system. Thus he says: "In all the blood vessels of the body, adrenalin causes constriction; the contraction of the heart muscle is augmented, the pupil is dilated, while the intestinal muscle, with the single exception of the small ring of muscle forming the ileocolic-sphincter, is relaxed." If these facts and deductions are true it is a beautiful illustration of the intimate relationship between nerve excitation and excitation by chemical means.

Another interesting illustration of a chemical reaction in our body is the secretion of the alkaline pancreatic juice as the result of acid introduced into the duodenum. So long as the contents of the duodenum remain acid the pylorus remains closed. In other words there is just sufficient pancreatic juice secreted to neutralize the acid chyme. This was formerly thought to be due to reflex nerve action but is now known to be due to the formation of a chemical, by the action of the acid on the epithelial cells of the intestines. This chemical messenger has been named "secretin," and is carried by the blood to the pancreas. Starling says, "This body, secretin, can be regarded as a type of a whole group of messengers, which, formed in one organ, travel in the blood stream to other organs of the body and effect correlation between the activities of the organs of origin and the organs on which they exert their specific effect. For these chemical messengers we have suggested the name of "hormone."

Recent investigation has shown that ferments play an important part in the metabolism of the body, and that these ferments are formed in the tissues themselves. We have as yet no warrant in the belief that the use of artificial ferments produce any beneficial effect upon the body, as chemical changes would take place in the ferments long before the tissues are reached. Modern physiology has taught us that the final processes of respiration and digestion take place in the tissues themselves, and that the respiratory passages and the organs of digestion are merely the means to bring the gaseous, liquid and solid food to the blood, thence to be conveyed to the tissues where the final changes take place through the action of the ferments. Changes formerly believed to be due to vital, or cell action, are now produced in the laboratory. The recent article by Dr. Stephenson, read before the Wayne County Medical Society on "Matter in the Ionized State," cited instances of how our newer knowledge has explained many obscure facts on a physical and chemical basis.

The facts cited above, drawn from various sources, show the practical value of some of the recent advances in chemistry and biology. Knowledge of the action of drugs is based upon animal experimentation, and should form the basis for their therapeutic use. Our empirical ideas are being replaced gradually by scientific knowledge. This is well illustrated by our increased knowledge of the cause and treatment of malaria. For a century, or more, it was known that the bark of the cinchona tree was beneficial in certain forms of fever occurring in low, marshy districts, in the southern latitudes. When the plasmodium malariæ was discovered in the blood and proven to be the cause of the disease, a great step in advance was made; next it was ascertained that the mosquito, of the genus Anopheles, was the carrier of the infection; then the action of quinine on the life-cycle of the plasmodium was worked out; and finally the extermination of the mosquitoes from infected districts has made one of the most fatal fevers manageable.

Yet with these facts within the reach of all, it seems strange that a physician should call such knowledge "ultra-science." A homeopathic physician told me of the fine results he has obtained

from the use of minute doses of arsenic in the treatment of malaria. I inquired if the plasmodium was found in the blood. He admitted the blood was not examined, and that the diagnosis was made from the symptoms. I would not dogmatically say, with my limited knowledge of the action of arsenic, that this was impossible; but I feel that I am justified in being skeptical until the action of arsenic in this disease has been proven, with the same accuracy as has the action of quinine; and until the diagnosis is made by blood examinations, instead of by the symptoms.

Advance in the therapeutic use of drugs will come from the employment of a small number of preparations studied experimentally, and used clinically in a large number of similar cases. The promiscuous, hit-and-miss use of a large number of preparations will never develop a scientific and logical knowledge of drug action. I have tried to point out in the above paper that we neglect often to avail ourselves of the knowledge gained from various sources. It is impossible to become familiar with all the work being done, so rapid are the advances in the various fields of medicine, but in proportion as we keep in touch with the trend of medical progress we will be better equipped to meet successfully the problems with which we are daily confronted.

NOSTRUMS AND PROPRIETARY PREPARATIONS

W. T. DODGE, M. D.,
Big Rapids.

The past twenty years have witnessed a large addition to the materia medica of new chemical discoveries, some of them possessing value. Among them may be mentioned various coal tar products and several new silver salts. Coincident with this valuable pharmaceutical development the country has been flooded with large numbers of preparations, introduced to the profession apparently as new products possessing marvelous properties. Many of these new preparations are merely mixtures of well-known drugs, given an attractive name and sold at several times their commercial value. Influenced by the undoubted value of some of the new chemical products, the medical profession has proven itself a ready prey to many of these nostrum venders, and has assisted some of them to accumulate large fortunes. Many of these products are really dangerous nostrums and contain drugs, the presence of which is denied in the advertisement, and, after the exploitations of the profession, have been openly advertised to the public as patent medicines. In most cases, however, the doctor has been reached with less expense than the lay patent-medicine buyer, and the doctor's influence in directing the attention of his patients to the ready made preparations prescribed by him has been depended upon to develop a lucrative business for the manufacturer. Until recently the doctor had no means of separating the chaff from the wheat in the multitude of new pro-

*Read at the Second Annual Meeting of the Third Councilor District, Battle Creek, October 6, 1908.

ducts presented to him. He could not analyze the preparations and for fear of missing some valuable agent like Argyrol or others of the new silver salts he endeavored to test many of the new products upon his patients. In this way he made use of some very simple drugs like boracic acid for which he paid or caused his patient to pay a fancy price or he gave something that was positively harmful. Sooner or later the patient discovered the name of the ready-made preparation given him and the next time he thought he was sick in the same way he went to the drug store and asked for the proprietary preparation.

A few years ago the American Medical Association, recognizing the necessity of establishing a clearing house to furnish the doctors information concerning unofficial remedies, provided for the appointment of a council on pharmacy and chemistry composed of eminent chemists, whose duty it is to investigate any product offered to the profession and publish the facts concerning it. A large number of preparations have been examined by the council, and many have been approved. There is now no excuse for the doctor being taken in by nostrum venders or permitting himself to be made a "catspaw' 'to pull rich chestnuts out of the fire for the advertising manufacturer. He can refer to the council any article presented to him and depend upon its being thoroughly investigated, and its nature exposed in the columns of his journal.

The council provided for the publication of an annual entitled "New and Non-Official Remedies" and adopted the following rules to govern them in their investigation of such remedies. The council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that so far as known it complies with the rules adopted by the council.

Rules governing the admission of articles to the book, "New and Non-Official Remedies."

Rule One. No article shall be admitted unless its active medicinal ingredients and the amount of such ingredients, nature and given quantity of the article be furnished for publication. The general composition of the vehicle, its alcoholic percentage, if any, and the identity of other preservatives must be furnished.

Rule Two. No chemical compound will be admitted unless sufficient information be furnished regarding tests for identity, purity and strength, rational formula, or the structural formula if known.

Rule Three. No article that is advertised to the public will be admitted, but this rule will not apply to disinfectants and food preparations except when advertised in an objectionable manner.

Rule Four. No article will be admitted whose label, package or circular accompanying the package contains the names of the diseases in the treatment of which the article is indicated. The therapeutic indications, properties, and doses may be stated. This rule does not apply to literature distributed solely to physicians, to advertising in any medical journals, or to vaccine and antitoxins.

Rule Five. No article will be admitted or retained concerning which the manufacturer or his agents make false or misleading statements as to the geographical source, raw material from which made, or method of collection or preparation.

Rule Six. No article will be admitted or retained concerning which the manufacturer or his agents make unwarranted, exaggerated, or misleading statements as to the therapeutic value.

Rule Seven. Labels on articles containing "poisonous" or "potent" substances must show the amounts of each of such ingredients in a given quantity of the product. A list of such substances will be prepared.

Rule Eight. If the trade name of an article is not sufficiently descriptive of its chemical composition or pharmaceutical character or is for any other reason objectionable the council reserves the right to include with the trade name a descriptive title in the book. Articles

bearing objectionably suggestive names will be refused consideration.

Rule Nine. If the name of an article is registered or the label copyrighted, the date of registration and the copy of the protected label should be furnished the council. In case of registration in foreign countries the name in which the article is registered should be supplied.

Rule Ten. If the article is patented ,either process or product, the number and date of such patent or patents should be furnished.

Among the many remedies approved by the council are adrenalin, agurin, alphozone, acetozone, argyrol, aristol, aspirin, benzosol, brometone, cascara evacuant, chloretone, creosotal, dermatol, diuretin, euquinin, formin, ichthyol, piperazine, protargol and many others which may be found in the files of the journal, and in the annual which is a reprint from journal articles revised each year. This book, with the National Formulary and the Pharmacopeia will furnish information upon any remedy the doctor needs to use. The journal has also published a small manual of the U. S. Pharmacopeia and National Formulary, at forty cents a copy, that will be found a valuable assistant for the busy doctor in his clinical work. A book fully as large as the annual consists of reprints of articles describing substances that have failed to meet the approval of the council and from this reprint I propose to quote liberally concerning articles that have been advertised in this section.

Acetanilid mixtures, anti-kamnia. At first the formula of this drug was acetanilid 68, Caffein 5, citric acid 5, and sodium bicarbonate 20. You are all familiar with the nature of the advertising followed by this firm. When the Council of Pharmacy and Chemistry began its work of independent and scientific investigation of proprietary preparations some of the questions asked were, "What guarantee has the medical profession that the formulas of these proprietary medicines are not changed at the will of the manufacturer?" "How can the physician who confidingly prescribes them for his patients know that the preparation which he orders today is the same as that which was furnished him last year, or which may be given him next year under the same name?" At once a wail as of injured innocence went up from countless venders of proprietary medicines who replied with one voice, "The honor and reputation of the proprietors and manufacturers is a sufficient guarantee of the stability and permanence of these preparations." The enactment of the National Foods and Drugs Act is bringing many things to light. Among other things it has furnished a demonstration of the value of the honorable assurance of nostrum venders. The nostrum anti-kamnia has pointed many a moral in the campaign in the last few years. When the pure food law went into effect the proprietors of this mixture found themselves in a sad dilemma. If they labelled their mixture in accordance with the provisions of the law they would have to admit that it contained acetanilid. Failing to comply with the law they must go out of business. The latter alternative was not to be thought of. The profits gained by selling with the aid of careless or ignorant physicians a five or ten-cent mixture for one dollar were too great to be surrendered without a struggle. The same brilliant intellect perhaps that first saw the commercial possibilities in the business said, "Change the formula. Phenacetin is about as cheap as acetanilid. The patent has just expired and consequently we can get it at a low price. Let us substitute phenacetin for acetanilid."

What assurance has the profession that at any moment a more dangerous drug may not be substituted for phen-

acetin, if thereby the law can be evaded or the profits of the business enhanced? Salacetin; acetanilid 43, sodium bi-carbonate 21, sodium salicylate 20. Phen-algin; acetanilid 57, sodium bi-carbonate 29, ammonium carbonate 10.

Bromo-seltzer. A teaspoonful contains potassium bromide 7 grs., acetanilid 3 grs., and caffein 8 grs.

Gude's Peptomangan. In addition to furnishing formulas to the profession of many secret proprietary remedies, the council has done a good work in exposing objectionable advertising methods. The proprietors of this preparation, by garbling the report of the commission on the study of anemia in Porto Rico, attempted to show that the results of treatment by peptomangan were far superior to those obtained from Blaud's pills and from well known iron preparations. An extract from the report of the commission is as follows: "It will be noticed that slight cases recover without iron, and here the difference in the tables is more marked while there is less difference among the marked cases in proportion to the number. The rapidity of cure is due apparently more to the personal equation of the patient and the rapidity with which the parasites are expelled than to the amount of reconstructive treatment. Thus it is quite difficult accurately to judge the comparative value of different iron preparations. Yet it was noticed even by some patients that Blaud's pills gave more rapid results." We do not believe that a perusal of the histories of the eighteen cases which the advertisement quotes demonstrates the superiority of peptomangan as those patients recovered more slowly than others of the same type who took Blaud's pills. In fact on account of the slow recovery the carbonate of iron was substituted for peptomangan in five of the eighteen cases.

Tyree's Antiseptic Powder. This preparation advertised as a "Scientific Combination of borate of sodium, allumin, carbolic acid, glycerine, and the crystallized principles of thyme, eucalyptus, gaultheria and mentha in the form of powder "is essentially a mixture of boric acid and sulphate of zinc, approximately four-fifths of the former to one-fifth of the latter.

Campho-phenique. This preparation is claimed to be composed of phenol 49%, and camphor 51%. Examination of specimens purchased in the open market demonstrate that these statements are not true. Instead of containing 49% of phenol, analysis shows that it contains not more than 20%. Instead of containing 51% of camphor, analysis demonstrates that the amount of camphor is not more than 38%. Besides phenol and camphor a third substance was found which proved to be liquid petrolatum and to be present to the extent of 38%. An examination of campho-phenique powder shows that 92% of it was a talcum-like inorganic substance. The remaining 8% consisted chiefly of camphor and a small amount of phenol.

Amolin. A deodorant powder advertised to the public as a coal-tar derivative of the phenol hydro-carbon series. Analysis shows it to be 99% boric acid and one per cent thymol. This should suggest to us that if we would give more thought and study to the official drugs at our disposal we would find ourselves depending less on proprietaries. To become conversant with all such drugs as have proved valuable therapeutic agents would not be difficult, for the number is not large. When we get down to facts we find that all patent or proprietary medicines that have any claim to therapeutic value depend for such value on some of these few proved drugs. This is well known in the cases of the too valuable but inexpensive drugs, boric acid and acetanilid, that form the basis of a large number of high-priced proprietaries. By disguis-

ing these well known chemicals through the addition of substances more or less inert and the substituting of names that either have no meaning or are misleading, the nostrum makers have been able to make millions of dollars.

How much better is the liquor antisepticus of the pharmacopeia, containing a solution of boric acid 2%, benzoic acid and thymol each 1%, and eucalyptol, oils of peppermint, gaultheria and thyme and 25% alcohol, put up by your own druggist, than listerine and other high priced proprietaries containing essentially the same formula?

Liquor antisepticus alkalinus. N. F. is an aqueous solution with 25% of glycerine, containing potassium bi-carbonate, sodium benzoate, sodium borate, oil of gaultheria, thymol, eucalyptol and oil of peppermint. Colored purplish with persionis it replaces the well known proprietary antiseptic solution. Prescribed in its official name and dispensed in a plain bottle this article will not become known to the public as a "cure all."

Vin Mariani. Before the enactment of the Pure Food and Drugs Act advertisements of this preparation claimed that it contained no cocaine. The label upon the bottle under the food and drugs act says, "One oz. represents 1/10 of 1 grain of cocaine." The advertisements also make unwarranted, exaggerated and misleading statements as to the therapeutic value. It is, in fact, a beverage containing cocaine.

Anasarcin and Anedemin. These preparations are both manufactured in Winchester, Tenn., a small town of about 1,500 inhabitants. The following is the report of the council upon anasarcin. This remedy is offered in two forms, anasarcin tablets, a pretended combination of the active principles of oxydendrum, arboreum, sambucus canadensis, urginea scilla and anasarcin elixir, said to contain the active principles of oxydendrum, sambusus, hepatica and potassium nitrate. The advertisements of these articles conflict with the rules of the council as follows:

With rules one and two. The composition of these articles is kept secret in that the proportion of the ingredients is not furnished. The statement that it contains the active principles is misleading since these are for the most part unknown. With rule six. The description of the pharmacologic action of anasarcin agrees practically with that of squill. No material part of its effects can be attributed to the other ingredients. Nevertheless the advertisement studiously cultivates the impression that anasarcin has no relation whatever to the digitalis group in which scilla is commonly placed. The claims are therefore misleading. The claim of its infinite superiority to digitalis; the claims that it cures neurasthenia, eliminates uric acid in rheumatism and is useful in obesity, cystitis, lumbago, eclampsia, dyspepsia and asthma and that it works wonders in exophthalmic goitre appear exaggerated or false; the recommendation of its indiscriminate use in nephritis for lowering the blood pressure and the statement contradicted in the firm's own literature that it is not depressing, are actually dangerous.

Anedemin is an imitation of anasarcin. The therapeutic claims are copied almost literally from the anasarcin circulars and are equally false. This wonderful remedy, anasarcin, is a typical sample of the revival under a new name and thin disguise of the old-time worn article, squill, the use of which in dropsy has been practically discarded, presumably because experience has demonstrated its general inferiority to other drugs. Anasarcin in dropsy illustrates the traits envolved in the use of semi-secret nostrums. It also shows how a short experience with the widely advertised but low standard drug is apt to lead to conclusions which more extensive experi-

ence demonstrates to be entirely fallacious.

The first lesson is that formulas are not always what they seem. A hasty glance at the formula of anasarcin tablets, the basis of the anasarcin dropsy cure, creates the impression that it is a non-secret remedy. As a matter of fact it is a secret nostrum of the insidious kind. A formula which omits the quantities of its ingredients means very little. Further than this, we do not hesitate to charge that the claimed composition is a deliberate deception. The circulars emphasize the claim that anasarcin consists of the active principles and not of the crude drugs. Now the active principles of sambucus and oxydendron are not on the market for the good and sufficient reason that no active principles have ever been isolated. Oxydendron, the sour wood or sorrel tree, is a small tree of the Heath family. Sambucus is the common elder. It is most unlikely that these two substances should play any part in the claimed powerful effect of anasarcin. They are evidently put in the formula, we do not say in the preparation, to obscure the fact that anasarcin is composed principally of squill. In brief then, it appears from the statement of the Anasarcin Company that the action of the remedy is that of squill and that the other ingredients are a mere blind. It is, of course, well known that squill can be used as a substitute for digitalis in cardiac dropsy although it is generally considered very inferior to the latter drug.

Any one wishing to use squill should take the trouble to acquaint himself with the results obtained by a competent and independent observer. He should also learn all contra-ingredients in the use of squill deduceable from the fact that it causes vasomotor constriction and lowering of blood pressure, prohibiting its use in Bright's disease and arterial sclerosis, that it produces marked gastric irritation, consequently nausea and depression, that it is a very toxic agent, and that the dangers of accumulative action must be born in mind. In respect to this the attempts of the anasarcin people are a little short of criminal, "That it is safe in administration. Non-toxic, as ordinarily administered. Will nauseate some persons but the reaction from the temporary depression is prompt. In Bright's disease, the interstitial and parenchymatous form of nephritis, no remedy to equal it in efficacy."

The company manufacturing anasarcin is located in Winchester, Tenn., a town of about 1,500 inhabitants, situated in an agricultural country. The town boasts of neither scientific schools, colleges, universities or laboratories. The office is in the rear of a jewelry store, in the business part of Winchester. On the second floor above, according to our reporter, the office force of about ten stenographers and clerks handles the correspondence and labels and sends out the preparation which is made in a crude frame building, located on a side street without a laboratory equipment.

Anasarcin tablets are sold for $2 per box of 100. A formula containing extract of sour-wood leaves, 2 grains, extract of elder flowers, 2 grains, and extract of squill ¼ of a grain, is put up in tablets by Park, Davis & Co., and sold in bottles of 100 for 50 cents.

If any physician desires to prescribe this formula, he would be doing justice to his patient's pocketbook to prescribe the Parke, Davis tablet.

Purgen. The physicians of the United States are receiving a neat package containing samples of the German proprietary, purgen. The container is an ingenious one and besides the tablets includes a circular in English, although mailed in Europe, describing the remarkable virtues of this new synthetic aperient. Physicians should understand that the promoters of purgen are simply in-

troducing a chemical well known to laboratory workers for the last twenty years, which has been recognized an aperient for at least seven years, and which can be purchased for 40 cents an ounce, whereas an ounce of phenolpthalein in the form of purgen will cost $3.20 wholesale. Phenolthalein is not in the Pharmacopeia, but has been included in "New and Non-Official Remedies" by the Council on Pharmacy and Chemistry.

Calcidin. In the advertising literature of the Abbott Alkaloidal Co., it is claimed that "calcidin, Abbott," produces therapeutic effects entirely different from those obtained from iodine in any other form. An analysis of the powder gives the following results: Available iodine 9.20%, calcium iodide 5.71, calcium oxide 18.45, calcium carbonate 34.85, corn starch 16.13, iron and aluminum traces, magnesium oxide .35, water 15.71. Calcidin is essentially a mixture of iodine, calcium iodide, lime and corn starch, and the preparation is made by mixing ordinary iodine, lime and corn starch, the calcium iodine and calcium iodate being formed by the action of the lime on the iodine in the presence of moisture. The exact amount of calcium iodide found in different specimens of calcidine will vary in accordance with the amount of moisture present and the age of the product. While it is claimed that calcidine produces therapeutic effects entirely different from those obtained from iodine in any other form, the introduction of calcidine in the acid stomach contents results in such chemical changes that it corresponds to giving iodine, calcium iodide, and calcium chloride, each one grain, the calcidine being equal to about 1/10 of a grain of iodine, 1/15 of a grain of calcium iodide and 4/5 of a grain of calcium chloride. As a comparison the average dose of Lugol's Solution is three minims, and these three minims contain 1/6 of a grain of iodine. A dose of calcidine is given as 1/3 to 2 grains, and this will contain from 1/30 to 1/5 of a grain of iodine. Calcidine, however, is usually prescribed in tablet form, and it has been demonstrated that the tablets do not have the same composition as calcidine itself, but instead are essentially the tablets of calcium iodide. While one grain of calcidine is equal to 1/10 of a grain of iodine, 3 calcidine tablets, which represent one grain of calcidine are equivalent to but 1/83 of a grain of iodine. While the recommended doses of calcidine itself will contain 1/30 to 1/5 of a grain of iodine, the same amount given in the form of calcidine tablets is equivalent to 1/250 to 1/40 grain of iodine.

Iodide of Lime, Nichols. Iodide of Lime, Nichols, is essentially a mixture of lime and iodine, containing about 10% iodine. Iodide of lime tablets, like calcidine tablets, differ in composition from the original substance which they are supposed to represent. Iodide of Lime, Nichols, was found to contain approximately, 10% available iodine. Each 1/3 grain tablet should therefore contain about 1/30 gr. of available iodine. Instead it was found that each tablet was equivalent to 1/128 gr. of free iodine. It is worthy of note that the tablets appeared decidedly brown in color which might be taken to indicate that they really did contain a considerable amount of free iodine. The examination, however, showed that the brown color was due to presence of a large amount of iron oxide.

Hyoscine, Morphine and Cactin Tablets. Some eight years ago a combination of Scopolamin and Morphine was introduced in Germany as an anesthetic. Since then it has been extensively used in Germany, France, Italy, Russia, United States and elsewhere and medical periodicals have contained many articles, reports, etc., on the subject. While the method and technique originated in Germany, and while it has had its greatest

use in that country, it has also been used more or less extensively in every other country, including the United States, and reports both favorable and unfavorable have appeared in all these countries. Two years ago the Abbott Alkaloidal Co. put on the market as a new anesthetic, a tablet said to contain 1/100 grain of Hyoscin, ¼ gr. of morphine and 1/67 gr. of a product called cactin. During the past year this tablet has been exploited to an extent and in a manner not equalled by any other medicinal preparation in this or any other country. Full page advertisements and reading notices, all extremely laudatory of the preparation, have appeared in medical journals of all kinds. More original articles highly praising it have been published than have ever appeared in the same length of time on any other one medical subject. The conclusion that the alkaloid obtained from hyoscyamus and that obtained from scopolamin are identical chemically, physiologically and clinically was reached some years ago. The Abbott Company, however, does not accept this conclusion. An editorial in the issue of their journal for December, 1906, under the title, "Another Death from Scopolamin," contains an abstract of a report of a death in Europe and closed by saying, "If Rys had employed pure hyoscine hydrobromide with morphine, it is probable that there would have been no fataliay." From a letter from Dr. Abbott, published in the Journal, January 26, 1907, I quote. "I am perfectly well aware that Scopolamin is claimed by some to be identical with hyoscine, but the fact remains that the same therapeutic results are not obtained from one that are obtained from the other." The following quotation is from Lanphear: "Hyoscine hydrobromide is a drug, of known strength, and apparently perfectly safe, whereas Scopolamin is notoriously unreliable."

The Pharmacopeia of the nation is the standard according to which drugs are manufactured and by which they are judged. In all cases these standards are recognized by law. They are the highest authority. "The alkaloid on the market as Scopolamin hydrobromide or Hyoscine hydrobromide is not made in the United States. So far as we are able to learn it is made only in Germany where the subject has been given more attention than elsewhere, and consequently is made according to the German Pharmacopeia, but the German Pharmacopeia recognized the alkaloid only under the name Scopolamin Hydrobromide. Hyoscine Hydrobromide was introduced in the German Pharmacopeia in 1891, but later the Pharmacopeia commission adopted the name, Scopolamin Hydrobromide, to replace Hyoscine Hydrobromide since the identity of the hydrobromide from the different sources has become established. Hence the German Pharmacopeia no longer retains the name Hyoscine Hydrobromide, for to do so would be to give two names to the same article, as we shall see one nation does, and officially recognzies the same alkaloid by two different names. The United States Pharmacopeia, eighth revision, which became official in 1905, adopted the new and more correct name Scopolamin Hydrobromide, and at the same time retained the old name Hyoscine Hydrobromide. The definitions are as follows:

Hyoscine Hydrobromide, the hydrobromide of an alkaloid, chemically identical with Scopolamin. Obtained from hyoscyamus and other plants of the Solanaceæ.

Scopolamin Hydrobromide, the hydrobromide of an alkaloid, obtained from the plants of the Solanaceæ, chemically identical with Hyoscine Hydrobromide.

The British Pharmacopeia, issued nine years ago, described an alkaloid under the definition Hyoscine Hydrobromide, but gives as a synonym, Scopolamin Hy-

drobromide. The Danish, the Swiss, the Netherlands, and the Japanese Pharmacopeia, all of which have been revised recently, described the alkaloid under Scopolamin Hydrobromide but did not mention Hyoscine. From this it will be seen that these two names legally belong to the same alkaloid, and it has been sufficiently demonstrated that this alkaloid in combination with morphine is often dangerous to life. The claim that H. M. C. Tablets, Abbott, are safe in doses recommended is not true. I have myself been so unfortunate as to have a fatal case from a single tablet and within a few weeks another fatal case from a single tablet has come to my knowledge in a neighboring city.

Therefore, so far aas I am concerned, the use of this combination has been permanently abandoned.

PERPLEXING POINTS IN SERUM THERAPY

MINTA PROCTOR KEMP, M. D.,
Detroit.

Some of the recent work on the therapeutic uses of serum may have the effect of making physicians feel overcautious in the use of all serums.

It is difficult to say whether many physicians have a fear of the therapeutic use of serum or whether they have not. A few years ago one might have said "All the doctors understand about antitoxin now," and since that time it seems that there have been enough papers written to clear up all doubtful points, and yet at the present time it is not easy to demonstrate the physician's state of mind on this subject.

In our every-day consideration of antitoxin there are certain points which should first come to mind:

In what cases would one fear to use serum?

Is antitoxic serum any more dangerous to give patients than normal horse serum?

Would you use serum after the expiration of the date on the label?

Has serum any bactericidal action?

Is it true that an excessively large dose will do no harm?

What is Cencentrated Diphtheric Antitoxin, and is there any advantage in using concentrated antitoxin?

What is meant by sensitization.

Why do rashes and joint pains sometimes follow the injection of serum?

What is meant by a unit of antitoxin?

* * * *

One of the incidental facts a doctor should know is that the toxin is not a simple poison like certain drugs, but is a complex substance, being the products of the secretion of the bacilli and contains various forms of poison just as the quinine plant does for instance; and we know that cinchona bark contains about 20 different alkaloids. Another incidental point is that the various diphtheric antitoxins are the same. The U. S. government has established a standard method of testing diphtheric antitoxin to which all biologic laboratories conform, and it is the duty of the government to examine the products of the laboratories and whenever they are found

deficient in quality their immediate withdrawal from the market is demanded. The standard is not one which all must equal and some may exceed, but is one which fixes the quality of the product. It therefore follows that one antitoxin is as good as another, and none is better than another.

It is possible that there are differences in serum that we do not know much about, differences which we are unable to detect with our present tests. We know that there are differences in antitoxic serum from animals of the same species; for which we are unable to account. Some horses are incapable of immunization. In biologic stables horses are frequently treated with toxin for a number of months, and then discarded because their serum does not give evidence of sufficient antitoxic strength to make them desirable animals for serum production. Some horses cannot produce antitoxin, and after we get it there are some people who cannot safely take it. There are certain cases in which one would hesitate in using serum for fear of disastrous results. They include those patients suffering from bronchial asthma and those in which there is a persistence of the thymus gland (status lymphaticus). This is as far as our present knowledge is at all positive. The theory of over-neutralization of the poison and of the presence of inert substances and several others that have been put forth seem to be unsatisfactory and not sufficiently substantiated.

It is unfortunate that this possible danger to the patient can not be determined more fully. We do not understand much about it as yet, but ten years ago we did not know that the danger existed. A man who has been engaged in serum manufacture for about ten years said a short time ago that the last ten years have not taught us much about serums; it has only shown us more things that we do not know.

The percentage of sudden deaths following the injection of antitoxin is so small that no greater fear for antitoxin is justified than for anesthesia. We do not know the cause of sudden death after serum injection, and we do not know the cause of sudden death during anesthesia.

The explanations we give are, however, most alarming, inasmuch as we usually grasp some rare and obscure condition as a cause.

A number of years ago antitoxin was regarded as almost a magical treatment for diphtheria, which would either kill or cure. We now realize that antitoxic serum is no more poisonous than normal serum, and that the same peculiar properties of white of egg makes its subcutaneous injection even more dangerous under certain conditions. On the label of each package of diphtheric antitoxin may be found a date up to which the maker guarantees the number of units which it contains. In regard to the use of serum after the expiration of the date it would seem that there is little or no danger of depriving the patient of proper protection by so doing. A number of tests on serum which had been on the market from three to seven years has shown the same number of units as was stated on the label. The recent work by Woodhead showed no deterioration in about 70% of one hundred and ten serums examined at intervals of from one to 28 months.

The period in which antitoxin is least stable is during the first few weeks after it has been drawn from the horse. Serum is not tested, labelled, and sent out from the laboratory until after that time, so there is little deterioration in the serum on the market. Most of the serum sent back for exchange after two years is probably still up to the original number of units. One must realize that the date is arbitrary and that the serum could not be fully up to the number of

units the day before and way below the number the date after, although the serum became exchangeable for new serum at that time.

Serum should be kept in a cool dark place, and in many drug stores the ice in the soda water fountain conceals our weapon against diphtheria.

By several investigators serum has been shown to have a bactericidal action. Experiments have been made which have shown this action toward various organisms. The bactericidal action of serum in the body of the patient is one of the fundamentals of the fascinating opsonic theory. In opsonic work it has been demonstrated the normal serum has a powerful action on bacteria and prepares them for phagocytosis. Normal salt solution and other indifferent fluids do not have such action.

The bactericidal action of serum is well shown by opsonic work and experimental work outside the human body.

Normal horse serum has been used with excellent results more in England than in this country in cases in which a powerful alterative seemed indicated.

Dr. A. E. Wright has said that serum treatment with certain exceptions has not been successful. It may be too soon to pass judgment on opsonic treatment, but his remark might be true of anything from which one expected too much.

There may be sharp limitations to the usefulness of antitoxin and likewise for bacterial vaccines. Antitoxin treatment was a revelation to science and physicians required time to calm down to correct thinking about it. Bacterial vaccines have come from one of the latest scientific exploits, and we have not yet settled into a fixed estimation of them.

It is true that we formerly believed the dangers of antitoxin to be conjectural and the benefits certain and positive. Now that certain dangers from sensitization have been shown on the lower animals, the question arises, "Is it true that an excessively large dose would do the patient no harm?"

Yes, as far as can be determined, any initial dose of serum which is in excess of the required amount has no injurious effect upon the patient. There is no reaction nor special symptoms, when the dose is unnecessarily large. The patient is unaffected by the surplus. In repeated injections of the serum however other factors would come in for consideration.

The concentrated diphtheric antitoxin which has lately come into extensive use gives us an antitoxin of reduced volume and of clear bright appearance and less sticky than serum, being almost as liquid as water. It was claimed by Gibson and others that nonessential elements had been eliminated and that rashes, joint pains and other reactions occurred less frequently. Recent experimental work has shown that weight for weight and volume for volume the cencentrated diphtheric antitoxin and whole serum possess equal power of sensitizing animals.

All of the people engaged in the production or use of serums have been very much interested in the work on sensitization which has been done at the U. S. hygienic laboratory.

In the experimental work a condition of hypersusceptibility was produced in guinea pigs by the injection of serum, normal or antitoxic or by protein substances. After an interval of twelve days or more during which time the animal became sensitized, another injection was found to cause great symptoms or death of the animal between 10 and 30 minutes after the injection. It was also shown that frequently repeated small doses (2 c.c.) did not sensitize the animals.

No human experiments have been made, so we do not know whether man could be sensitized in the same way or not. After an animal had been sensit-

ized a very small dose produced fully as grave symptoms as a large dose. The time required for sensitization to develop is ten or more days after the first injection of serum. In the diseases in which serum treatment is commonly used, one would expect either recovery or loss of the patient in that length of time. In an acute or severe illness, it would not be advisable to minimize the dose for fear of sensitizing the patient.

* * * *

Just why rashes and joint pains sometimes follow the injection of serum is without any satisfactory explanation. Records, which have been kept in hospitals show that they occur in about one-third of all cases, regardless of the make of the serum, site of injection, severity of the case, or whether the serum was obtained from horses, goats or other animals. Rashes seem to be the result of some quality of the serum and susceptibilitiy of the patient, since they may occur after injections of normal serum as well as antitoxic serum. Such reactionary effects occur less frequently after single injections of serum than they do after prolonged serum treatment. How much serum is meant by a unit? The unit is the measure of strength of antitoxin. Antitoxic serum as it comes from the horse is of unknown strength. One can not judge of its strength by the amount of toxin that has previously been given to the animal or in any other way. The serum must be tested after it has been separated from the blood cells. If it is strong in antitoxic power, it requires less volume to each syringe in which it is put on the market. So that 3,000 units for instance is not a fixed volume, it may be 5 c.c. or more or less according to the antitoxic power of the serum. A unit is the amount of serum which will neutralize a given amount of toxin of known strength. That is the way we determine what volume of each lot of serum it will take to represent 3,000 units or 4,000 units, etc.

The unit is a measure of strength, not of quantity. The test of strength is physiologic being determined on guinea pigs. Method used is against a diphtheric toxin of known strength. The quantity of diphtheria toxin which will neutralize one immunity unit plus a quantity necessary to kill the guinea pig weighing 250 grams on the fourth day is an L+ dose.

That quantity of serum necessary to add to the L+ dose of the toxin so that the mixture injected subcutaneously will kill a guinea pig weighing 250 grams on the fourth day contains just one immunity unit. The quantity of serum representing a unit is a very minute amount, much less than one drop.

The points we have considered are those which may occur to encourage or perplex us almost every time we use serum. Many other points may come up as well, as every case presents its own peculiarities and its own problems. They are important points inasmuch as the brilliant results which follow the proper application of serum treatment may be seriously affected by lack of consideration of them.

References.

Serum in Asthma Cases
Journal of South Carolina Medical Association, December, 1907.
Journal of A. M. A., January 4, 1908.
Journal of Northwest Medicine, March, 1908.

Longevity of Serum
Journal of Pathology and Bacteriology, July, 1908.

Anaphylaxis (Sensitization)
LEWIS. *Journal Experimental Medicine,* 1908, Vol. X, No. 1.
GAY AND SOUTHARD. *Journal Medical Research,* 1907, Vol. XVI, No. 143.
ROSENAU AND ANDERSON. Bulletin 29, U. S. P.H. and M.H.C., 1906.
ROSENAU AND ANDERSON. *Journal Infectious Diseases,* Vol. V, No. 1.
CURRIE. *Journal of Hygiene,* 1907, Vol. VII, No. 68.
NICOLLE. *Annals Inst. Pasteuh,* 1907, Vol. XXI, No. 128.
RICKET. *Annals Inst. Pasteur,* 1907, Vol. XXI, No. 497.
BESREDKA. *Annals Inst. Pasteur,* 1907, Vol. XXI, No. 777.

Concentrated Diphtheric Antitoxin
Journal Biol. Chemistry, Vol. I, p. 161.

Bactericidal Action of Serum
MUIR. *Journal of Pathology and Bacteriology,* July, 1908.
DEAN . *Proceedings of the Royal Society,* Vol. 79.

THE TECHNIC OF SUPRAPUBIC PROSTATECTOMY.

G. H. PALMERLEE, M. D.,
Detroit.

Before describing the technic of the operation it is very important to consider briefly a few points in the anatomy of the prostate. The prostate gland is a musculo-glandular organ which surrounds the neck of the bladder and the beginning of the urethra in the male. It is situated above the deep layer of the triangular ligament, and behind the lower part of the symphysis pubis, its posterior surface resting on the rectum.

In fetal life the gland is in two distinct lobes, i. e., right and left, while the so-called third lobe, which is not constant, is nothing more than a small prominence in the notch between the lateral lobes, where the bladder opens into the urethra. The so-called third lobe is often the principal cause of obstruction, by acting as a ball valve and thus preventing the emptying of the bladder. In many instances the hypertrophied third lobe conveys the impression, through the medium of the catheter or sound, of a foreign body in the bladder, it being impossible to differentiate it from an encysted calculus. At birth the lateral lobes have become approximated, forming the anterior and posterior commissures and surrounding the urethra, yet the lobes may be easily separated. However, while the lateral lobes are welded together, they are, as far as function is concerned, as separate as the testes; each lobe is enveloped in this fibrous tissue called the true capsule; and the whole gland is again surrounded by the pelvic and recto-vesical fasciae, forming the sheath. It is this covering that is of so much importance from a surgical point of view, since the gland must be enucleated from it with the least possible trauma.

The blood supply is from the internal pudic, vesical, and hemorrhoidal arteries. The veins of the prostate empty into the internal iliac, therefore, it is evident that great hemorrhage will follow the breaking up or tearing to pieces of the external sheath.

Investigations of the anatomy of the prostate gland by such men as Freyer, Thompson and Richardson, although differing from the text books, can not be ignored. Their studies show that the blood vessels ramify in the sheath, and that in hypertrophy of the prostate the vessels are greatly enlarged.

In the practice of Dr. J. B. Kennedy and myself, we are frank to admit that the mortality of our cases has been higher than some operators and we believe this to be due, not alone to our not properly selecting our cases, but in some of our earlier cases, to error of technic in not preserving the sheath as much as possible.

Dr. J. B. Kennedy's present technic is as follows: The patient is anesthetized and prepared in the usual way for laparotomy. The incision is made through the skin just above the pubis for about three inches and a little to the right and the recti muscles and fasciae separated; the bladder is filled with boric acid solution, so as to push the anterior bladder wall upwards. The pre-vesical fat now presents itself and is dissected upward and the anterior bladder wall exposed below the peritoneal fold which

may be recognized by a transverse white line. The bladder wall is punctured with the point of the knife and the incision enlarged with abdominal scissors; the metal catheter through which the bladder was filled is left in place and held by an assistant.

The left hand is passed under the patient's left thigh, the first and second fingers protected by a glove, are inserted into the rectum and the prostate pressed up as far as possible towards the enucleating finger. The operator now introduces his index finger of his right hand through the suprapublic wound and locates the tip of the catheter in the upper part of the superior commissure. The finger is pushed over the catheter and under the external sheath along the superior commissure which separates the lateral lobes, and does not attack the most prominent part of the prostate, since the finger is liable to wander outside the external sheath, which act will tear it to pieces and cause dangerous if not fatal hemorrhage; but by using the tip of the catheter as a guide to entering the superior commissure, and passing the finger along the catheter it is inside the external sheath,

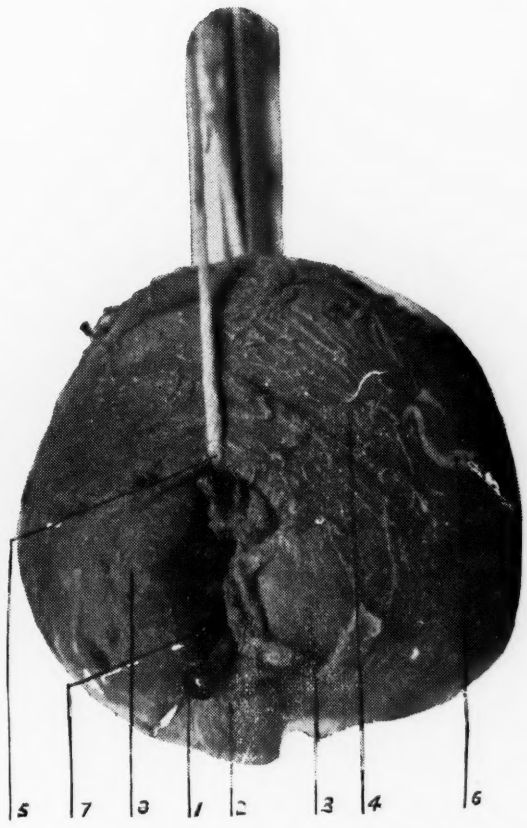


Fig. I.—1. Tip of Catheter. 2. Third Lobe. 3. Right Lobe in Its True Capsule. 4. External Sheath. 5. Cord Fassing Through Superior Commissure. 6. Torn Blood Vessel in the External Sheath. 7. Point of Entrance for the Finger at the Beginning of Enucleation. 8. Left Lobe.

because the external sheath does not dip down between the lobes; and again the finger passing along separates and easily loosens the lateral lobes from each other and the superior surface of the lobes are freed from their attachment to the external sheath. The finger is passed along in this manner as far as the enlargment extends or to the triangular ligament.

The next step is to sweep the finger over and around the lobes to the inferior commissure; keeping close to the gland and continuing around the lobe to the superior commissure or the starting point; this frees the lobes from the external sheath, except where they join the triangular ligament. This point is next attacked by passing the finger along either the superior or inferior surface of the lobes and hooking the finger over the end of the gland; it is thus dissected loose and removed. Some operators advise nicking the mucous membrane of the bladder over the most prominent enlargement but, in our experience in a series of 85 cases, and as we previously mentioned, from the

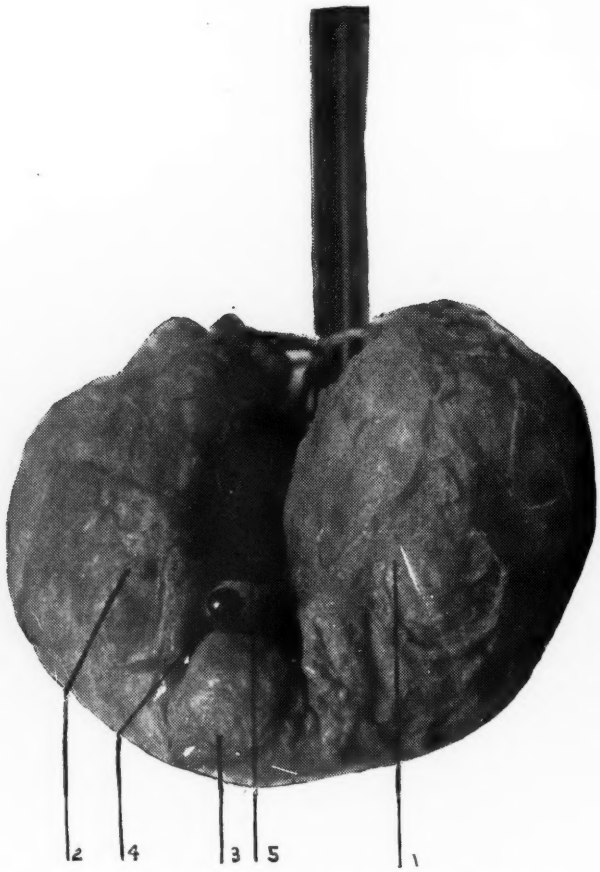


Fig. II.—1. Right Lobe. 2. Left Lobe. 3. Third Lobe. 4. Tip of Catheter. 5. Superior Commissure. Time occupied in removing this gland was one and one-half minutes. This man aged 76 left the hospital 17 days after the operation. The suprapubic wound was entirely closed and the bladder control was complete.

mortality in our early cases, we believe that it is of the greatest importance to use extreme caution to first make sure that the finger is guided into the superior commissure by the tip of the catheter, and between the sheath and the gland.

Of the 85 patients operated on in the practice of Dr. Kennedy and myself ten died following the operation, two from hemorrhage, two from uremia, one from embolism, two from pneumonia and the others from exhaustion; these latter had septic bladders and they were bed ridden and very unfavorable cases for operation.

As a rule there is not much hemorrhage and if there is a little bleeding it can usually be controlled by boric acid solution at 120 F. Should there be a profuse hemorrhage, however, following the operation, which cannot be controlled by the hot boric acid solution, we do not hesitate to make a small opening through the perineum and pass through this opening, from the supra pubic wound, a cord to which is attached a sterile piece of gauze rolled into a ball large enough to fill the cup shaped cavity left by the enucleated gland; by making tension on the cord and fastening it to the thigh with adhesive plaster the pressure of the gauze will control the hemorrhage. A drainage tube is placed in the wound and a part of the skin wound closed by three or four silk worm sutures. A liberal amount of gauze is now placed over the abdomen and covered with a pad, and this dressing is changed about every two hours. After the third day the tube is removed and bladder washed out through the urethra and through the suprapubic wound, occasionally passing a catheter. The wound is allowed to granulate and is usually closed in three weeks. About the third or fourth day the patient is allowed to sit up in a wheel chair.

In cases when the bladder is infected and urine is full of pus we do the operation in two steps; first doing just a suprapubic cystotomy, thus allowing the bladder physiological rest, using irrigation every day. This has been our procedure for three years in this class of cases and we find that the termination is more favorable, since the first operation is very short, and allows the patient to recover from his septic condition which is made worse by doing the whole operation at once; the patient suffers more shock, which he is little able to withstand, besides favoring a fresh site for the entrance of infection in the cavity recently occupied by the prostate.

The bladder is irrigated every day with boric acid solution or sometimes 1-8000 nitrate of silver solution, and in about ten days or two weeks the bladder becomes clean, and the patient is in a much better condition for operation, and the gland is removed at this time.

The time occupied in doing the operation varies with the case of course, and is a matter of considerable importance to this class of patients who usually do not stand well a prolonged anesthesia. I have seen Dr. J. B. Kennedy do the enucleation in fifty-five seconds, rarely does he take longer than three minutes.

The accompanying cuts serve to illustrate the extremely important points in the technic mentioned above. Figure No. 1. This is one of our first cases (this patient died of hemorrhage). It can be seen at a glance that this gland was removed with an intact external sheath, which still surrounds it; whereas, had the gland been enucleated from the sheath, it would appear like Fig. No. 2. Notice how the lobes fall apart because the external capsule or sheath was left behind. In Fig. No. 1, note cord passing through the superior commissure and under the sheath.

In cases of simple hypertrophy or non-malignant growth of the prostate the above points in technic should be borne in mind, but if the growth be malignant, it is impossible to remove the gland from the sheath completely, because of the tendency to infiltrate into the surrounding tissues. We are then confronted with the same problem as in cancer of the breast and uterus.

We are aware that the suprapubic method does not meet with much favor with some good surgeons. There are many operators who are as strong advocates of the perineal method as we are of the suprapubic method. However, we think the disadvantages of the suprapubic operation, as claimed by a few surgeons, are more imagined than real.

In our series of cases, extravastion of urine has never occured; neither has there been hemorrhage into the scrotum; and in no case has a permanent fistula resulted.

Conclusions.—The suprapubic operation can be done more rapidly and affords better opportunity for examining the bladder and the removal of calculi often present in these cases. Wounding the rectum in the hands of a competent operator is almost impossible. The third lobe is not overlooked. The suprapubic wound is usually closed and the patient able to urinate voluntarily in three weeks; occasionally, however, the wound closes in two weeks and the patient is able to go home, having complete control of the bladder.

"Paracentesis" is a misnomer. The drum should be *slit* from below upwards and near the posterior margin, throughout its entire extent. In withdrawing the knife it may be allowed to cut deeply into the upper canal wall near the drum (internal Wilde's incision).—*American Journal of Surgery.*

Pain in the ear, increased on traction on the auricle, with slight diminution, if any, of hearing, suggests a furuncle in the meatus. Introduce the speculum with great care. The probe will often reveal a point of marked tenderness.—*American Journal of Surgery.*

Don't incise a furuncle of the auditory canal. Tampon the canal with a wick of cotton or gauze saturated with liquor Burowii (acetate of aluminum), resorcin-alcohol, or balsam of Peru, and wait until pain has disappeared. Hot applications may be needed. A furuncle pointing and threatening to burst may be opened with a superficial cut. Avoid wiping the pus along the canal, the result is almost inevitably a fresh crop of furuncles.—*American Journal of Surgery.*

If one suspects acute cholecystitis and on opening the abdomen does not find the gall-bladder enough diseased to warrant further procedure, it is best to anchor the tip of the organ by suturing it to the abdominal wall. If further symptoms are manifested, the gall-bladder can then be opened without anesthesia and a catheter inserted for drainage.—*American Journal of Surgery.*

A persistent sinus after an operation for appendicitis in the majority of cases means that a portion of the appendix has been left behind. It may also mean that an exudate has not broken down or that some foreign body has been left in the wound. One should give the sinus an opportunity to close by itself, but if it does not do so, a prolonged operation is necessary. The walls of the sinus must be carefully excised, all rents in the serosa of the intestine sewed over and drainage instituted, as there is often considerable oozing from raw surfaces. First and foremost, the primary cause of the sinus must be found and corrected.—*American Journal of Surgery.*

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

Subscription Price, $2.00 per year, in Advance.

DECEMBER

Editorial

Uniformity of medical laws in the various states is much to be desired. The American Medical Association, acting through its committee on legislation and public policy, has been laboring for several years to bring about such uniformity along several lines. From the viewpoint of both the profession and the public, one of the most important subjects on which state laws should agree, is that of the qualification to practice medicine. There are those who are ever clamoring for a national licensing board; one hears it talked of in medical meetings and now and then resolutions are passed endorsing such a board. Urgently as we need it, a national board can never be created, for the granting of a license to practice medicine is one of the police duties of the commonwealth and cannot, under the United States constitution, be taken over by the national government. Efforts, therefore, must be directed toward the enactment of uniform laws in all states and a broadening of the reciprocal relations of the various state boards. These boards have acted on the principle "that it is not necessary to wait for the millenium of uniform requirements before extending to the worthy and well qualified individual the advantages of reciprocity," and have established such between three-fourths of the states. The different standards, however, make the work complicated and difficult. The time may come when there will be such uniformity that a license to practice in one state will be equivalent to a national license.

State legislation regarding pure food and drugs should be uniform. The present national pure food law applies only to such articles as come under the jurisdiction of the inter state commerce act —i.e., articles which are shipped from one state into another. In many of the legislatures, there will be introduced at the coming sessions, pure food bills drafted from a common model.

Uniform laws regarding the reporting of contagious diseases are also much to be desired. One of the results of the active campaign against tuberculosis, the educational value of which has never been equalled by any movement of the kind, will be the awakening of sentiment in favor of better and more uniform health laws in the various states.

Vital Statistics laws are most important, for upon the accuracy and uniformity of vital statistics depend all the important data secured by the census department regarding longevity, diseases, births, effects of occupation, etc. This information is most necessary in many commercial undertakings and is of the utmost economic importance. The American Medical Association has prepared a Vital Statistics Bill, which will be brought to the notice of all state legislatures.

These are but a few of the subjects along which progress is being made. Much has been accomplished, but the work is still in its infancy. It is the duty of the medical profession not only to initiate, but also to stand behind all endeavors which are being made to better the conditions under which our people live.

The campaign against tuberculosis in the United States has made marvelous

strides in the past two years. So much has been written concerning it, both in medical journals and in the lay press, that the subject has ceased to be novel, yet there is danger that there will be a reaction from the present enthusiasm and a loss of interest on the part of the profession, resulting in half completed work. The reports of the meetings of the recent International Congress in Washington, focused attention upon the work and afforded an opportunity for reviewing, in detail, the achievements of the past few years. Even the active workers have been surprised by the reports of the growth of public interest, for few realized how widespread this interest had become.

The National Association has devoted a portion of the income from the Russell Sage Foundation to the publication of a directory of the anti-tuberculosis movement. It contains classified lists of sanatoria, hospitals, day camps, dispensaries, tuberculosis classes, associations, state laws, typical forms of organization, etc. The book is extremely valuable for reference and is distributed at cost price.*

From this book we learn that there are now nearly 250 sanatoria for the treatment of tuberculosis in the country, the first, of course, being that founded in 1885, by Trudeau, at Saranac. There are 158 dispensaries, devoted exclusively to the disease, all except 35 of which have been established during the past two years. In 1892, the Pennsylvania Society for the Prevention of Tuberculosis was founded; this was the first organization effected for education and preventive work. The rapidly growing interest in the subject, manifested in 1903 and 1904, resulted in the formation of the National Association. In August of 1908 there were 195 special societies and every month there have been additions to the list. The "class" method of instruction has been adopted in some cities and has proven successful. The first was established by Pratt in Boston and is supported by the Emanuel church. Twenty-three such classes are listed in the directory, but the editor remarks that there are undoubtedly more.

*_The Campaign Against Tuberculosis in the United States._ Including a Directory of Institutions Dealing with Tuberculosis in the United States and Canada. Compiled under the direction of the National Association by Philip P. Jacobs. 467 pages. Price, $1.00, prepaid. Charities Publication Committee, 105 East 22nd St., New York City.

Eighteen states have established sanatoria. The date of the first appropriation and the amount of appropriations to August, 1908, in each instance are interesting from a comparative standpoint: Alabama, 1907, $40,000; Connecticut, 1903, $120,000; Georgia, 1907, $25,000; Indiana, 1907, $30,000; Iowa, 1906, $100,000, and $5,000 annually; Kentucky, in 1908, appropriated $25,000, to be distributed annually to the Association Sanatoria; Maryland, 1906, $450,000; Massachusetts, 1895, $675,000; Michigan, 1905, $108,000; Minnesota, 1903, $25,000; Missouri, 1905, $50,000; New Hampshire, 1905, $50,000; New Jersey, 1902, $250,000; New York, 1900, $250,000; North Carolina, 1907, $15,000; Ohio, 1904, $35,000; Pennsylvania, 1903, $1,013,000; Rhode Island, 1903, $100,000; Wisconsin, 1905, $185,000.

The total of the appropriations in these eighteen states is over three and one-half millions. Massachusetts was the pioneer in providing state care, and Pennsylvania has been the most liberal.

Michigan has been one of the leaders both in the organization of educational associations and in the establishment of hospitals and dispensaries. From time to time the *Journal* has published most of the following information; it is republished in order that a convenient reference list may be at hand.

LEGISLATION.

The State Board of Health has required notification since 1893. Bulletins to teachers regard-

ing contagious diseases, and tuberculosis especially, were authorized in 1895 and have since been issued.

ASSOCIATIONS.

The Michigan Association for the Prevention and Relief of Tuberculosis (1908). President, C. G. Jennings, M. D., Detroit; Secretary, A. S. Warthin, M. D., Ann Arbor.

Upper Peninsula Association for the Prevention and Cure of Incipient and Contagious Diseases (1907). President, F. McD. Harkin, M. D., Marquette; Secretary, G. N. Orr, M. D., Lake Linden.

Alma Anti-Tuberculosis Society (1908). President, I. N. Brainard, M. D., Alma; Secretary, J. N. Day, M. D., Alma.

Alpena County Anti-Tuberculosis Association (1908). President, Michael O'Brien, Alpena; Secretary, C. W. Williams, M. D., Alpena.

Detroit Society for the Study and Prevention of Tuberculosis (1905). President, S. T. Douglas; Secretary, E. S. Sherrill, M. D., 270 Woodward Ave. On June 9, 1908, over $10,000 was obtained by "Charity Day." Four visiting nurses maintained.

Anti-Tuberculosis Association of Dowagiac (1908). President, J. H. Jones, M. D., Dowagiac; Secretary, Carrie F. Herkimer.

Grand Rapids Anti-Tuberculosis Society (1908). President, John W. Blodgett, Grand Rapids; Secretary, John Ihlder. Maintains a nurse and a special dispensary. The first society to be formed in the state.

Hastings Anti-Tuberculosis Association (1908). President, G. W. Lowry, M. D., Hastings; Secretary, C. H. Lothrop, M. D., Hastings.

Holland Anti-Tuberculosis Association (1908). President, Luke Lugers; Secretary, E. D. Kremers, M. D., Holland.

Houghton County Anti-Tuberculosis Society (1908). President, Judge Norman N. Haire, Houghton; Secretary, Helen B. Dunston, Hancock. Work carried on among the miners through nine health committees.

Jackson County Association for the Study and Prevention of Tuberculosis (1908). President, N. H. Williams, M. D., Jackson; Secretary, Rev. R. E. McDuff. The association hopes to have shacks on the grounds of the city hospital by the spring of 1909.

Kalamazoo Anti-Tuberculosis Society (1908). President, Herman Ostrander, M. D., Kalamazoo; Secretary, David Levy, M. D., Kalamazoo.

Marshall Anti-Tuberculosis Society (1908). President, S. K. Church, M. D., Marshall; Secretary, E. B. Stuart, Marshall.

Muskegon Anti-Tuberculosis Society (1908). President, F. W. Garber, M. D.; Secretary, Mrs. Ione Williams, Muskegon.

Owosso Branch of the Michigan Society for the Study and Prevention of Tuberculosis (1908). President, S. E. Parkill; Secretary, Maire S. Brewer. A lecture campaign has been started by the society.

Ottawa County Anti-Tuberculosis Society (1908). President, Rev. S. B. Ford, Coopersville; Secretary, E. D. Kremers, M. D., Holland. Organized by the Ottawa County Medical Society.

HOSPITALS.

Michigan State Sanatorium (Sept. 1, 1907). Located at Howell. For incipient cases only. $7.00 per week. Those unable to pay cared for as state or county charges. Superintendent, R. L. Kennedy, M. D. Capacity, 38.

Detroit. Tuberculoiss Hospital of the Board of Health (July, 1908). No charges. Medical Director, G. L. Kiefer, M. D. Capacity, 25.

Eloise. Wayne County Tent Hospital (1904). For all classes of indigent consumptives. Superintendent, J. J. Marker, M. D. Capacity, 24.

Grand Rapids. Municipal Tuberculosis Sanatorium (June, 1907). $10.00 per week for non-residents; indigent of Grand Rapids, free. Superintendent, Mrs. Hugo Lupinski.

DISPENSARIES.

Kalamazoo. The Tent Colony. Capacity, 6.

Detroit. Board of Health Tuberculosis Clinic (1906). Open three days a week. Visiting nurse in connection with clinic. Milk and eggs are supplied to the needy. Physician, V. C. Vaughan, Jr., M. D.

Detroit Throat and Chest Free Dispensary (1908), 238 Hastings Street. Supported by a private organization of which H. N. Hovey is president. Physician, E. L. Shurly, M. D.

Free Dispensary of the Grand Rapids Anti-Tuberculosis Society (1908). A visiting nurse is employed. Physician, Collins H. Johnston, M. D.

ASYLUMS.

The Michigan Asylum for the Insane at Kalamazoo has accommodations for 30 tuberculosis patients. Separate wards were opened in 1905. Superintendent, A. I. Noble, M. D.

The Eastern Michigan Asylum at Pontiac maintains separate wards with attached verandas, having a capacity of 35. Superintendent, E. A. Christian, M. D.

♣ ♣ ♣

The work of the State Tuberculosis Association should be better understood and appreciated by the profession. It is still in its infancy, but it is destined to accomplish much. It was orgaized in February, 1908. According to the Constitution adopted the State Association consists of local branch societies or committees organized in each town or county of the state. Seventy local committees of organization were appointed, but up to the present time only sixteen of these have organized and only 300 names have been registered as members of the State Association. It is necessary that an active campaign of organization be pushed throughout the state during this coming winter. Funds are greatly needed for the purpose of conducting this organization and a number of important matters must be taken up by the State Association, and for these money is necessary. In the active pushing of the anti-tuberculous campaign during the coming winter, the Association has for its aims the establishment in every county and large town of the state a local branch association, the double function of which will be the consideration of the local problem and the broader State and National aspects of the anti-tuberculosis campaign. State legislation will be sought, a traveling state exhibit will be formed, local lectures arranged for, movements for additional sanatoria and dispensaries set into action, the introduction of hygienic education into the public schools will be advocated, and the coöperation of all social groups solicited in the furtherance of the educational campaign. The great lesson of the Congress is that of prevention rather than of cure. The cases of incipient tuberculosis not giving off bacilli in sputa may be safely treated at home if possessing at least comfortable means; if unable to meet the circumstances such cases should have proper sanatoria provided for them by the State. Open cases of tuberculosis, that is, cases giving off tubercle bacilli in sputa, must be made safe, either through education or segregation. For a large percentage of tuberculous cases institutional segregation must be carried out in order to protect the community. It has been definitely shown that the decrease in the death-rate from pulmonary tuberculosis in England, New York City, Berlin, etc., is not due to improved local conditions, such as over-crowding, etc., but to institutional segregation. The problem in Michigan, therefore, includes that of institutional segregation and the State Association must take immediate action along this line. Sanatoria for advanced cases must be secured, tuberculous patients must be segregated in our asylums, prisons, state hospitals and county houses.

♣ ♣ ♣

The Anatomik Footwear Company of Shelton, Conn., is the latest firm to come out with a profit-sharing scheme. For a year or more the company has been advertising in medical journals and it now announces a twenty per cent discount on all orders for shoes at $15.00 or more made for patients. The physician is to take the measurements, forward the money and pocket the twenty per cent.

The idea of a business firm making agents of the physicians of the country is an old one, and one which has appealed to many firms as a particularly attractive method of disposing of their wares. It has never been successful and never will be. One does not feel flattered by the generous offers of **$3.00 for** every pair of **shoes one sells.** Would one feel small when the check for the $3.00 came? It's another phase of the division-of-fee **graft.**

♣ ♣ ♣

If physicians advertised. One often hears laymen express the opinion that physicians should advertise in the press, so that the public might learn the qualifications of prospective medical advisors. Were physicians to do so, the public would be able to form less correct opinions than is now the case. An example of what might occur is the following, which has been appearing in the *Detroit Free Press,* under a large picture of the distinguished individual with the distinguished ancestors:

"Dr. E. L. M. Bristol has won a name by his skill and treatment of stomach and intestinal diseases. By an intuitive sense he has become a great diagnostician. Dr. Bristol is a Detroit boy, a son of Charles LeRoy Bristol and Mary Ann Brevoort. His father's people were all heroes in the colonial wars—Patrick Henry, Commodore Perry and the LeRoys. His mother was the only daughter of Major Henry Bergau Brevoort, and his wife, Catherine de Navarre. Major Brevoort was honored by congress for his gallant behavior on the ship Niagara under Commodore Perry in the battle of 1812 on Lake Erie. During the war of 1812 he was taken prisoner by the Indians. The old Brevoort place on the River road was besieged and the doctor's mother was hidden in the garret. Mrs. Major Brevoort was a direct descendant of the Duke of Vendome, and first cousin of General Alexander Macomb. Dr. Bristol studied with Dr. J. B. Book, and graduated from the Jefferson Medical College, Philadelphia. He located in New York city, where he became a prominent Mason, being of the thirty-second degree and a member of the Mystic Shrine. He went abroad four different times, visiting all the hospitals of Europe, from the leper hospital in Norway to those in the far east. Gaeta on the Black Sea, Constantinople, Athens, Rome, and all through Italy, Vienna, Berlin, Paris and London. In New York he married Miss Mathilde White, a beauty and great linguist. Her early death was much lamented. Dr. Bristol built the famous Chateau de Navarre, at Stamford, New York. It is the show place of Delaware county and greatly admired. Back of the chateau the Delaware river rises and runs through the woods and grounds of the chateau. An antique sun dial marks the time and the stream flows into a large fountain, the basin is filled with pond lilies of red, white, blue, pink and yellow. Every season the doctor and his sister, Mrs. Barr, give a large fete for the benefit of charity. Dr. Bristol has returned to Detroit to live, having interests and realties in Michigan to look after. Mrs. Frances Barr-Bristol, his sister, the widow of Capt. L. S. Barr, U. S. A., lives with her brother. They are members of Christ church and reside at 610 Jefferson avenue."

What splendid qualifications!

♣ ♣ ♣

COMMITTEE OF LEGISLATION, MICHIGAN STATE MEDICAL SOCIETY.

Notice.

The committee is informed that the promoters of several proposed legislative bills of interest to the profession, are at this time, and prior to the meeting of the legislature, solicit-

ing the endorsement by medical men throughout the state, of these bills. This committee has not as yet had an opportunity of reviewing these bills, but will make its report and recommendations to the Board of Councilors at its meeting next January, in Detroit. Immediately after this meeting, this committee will send to the secretary of each county medical society its review and recommendations covering these proposed bills, as endorsed by the Council. In the meantime, the committee would earnestly request members to refrain from committing themselves to medical, or semi- or mixed medical legislation, of whatsoever kind.

WALTER H. SAWYER, Chairman.

Book Notices

Modern Medicine: Its Theory and Practice. In original contributions by American and foreign authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 900 pages each, illustrated. Volume IV. Price per volume, cith, $6.00, net. Lea & Febiger, publishers, Philadelphia, 1908.

One of the excellent features of this admirable system is the arrangement of the various volumes. It has been so planned that the consideration of affections of any system or allied diseases is confined to one book, not an easy task when one considers the immensity of the work. Another feature of excellence is the choice of the men whose names appear as contributors. It is safe to say that no other so-called system of medicine has had more renowned authors than this, nearly every one of whom is an authority on the particular subject of which he writes.

The fourth volume is divided into three parts as follows: Part I—Diseases of the Circulatory System; Part II—Diseases of the Blood; Part III—Diseases of the Spleen, Thymus, and Lymph Glands.

The first chapter, by Hoover of Cleveland, on "General Considerations in Cardiovascular Diseases," contains a review of the latest knowledge in the physiology of the heart and blood vessels. It serves as a fitting introduction to this section. McPhedran of Toronto contributes the chapter on the Pericardium, and Babcock of Chicago, that on the Myocardium. The latter says that myocarditis of drunkards is due to the increased work thrown on the heart in beer drinkers, and to the impurities of whiskey and the general mode of life of spirit drinkers, rather than to alcohol, per se. Osler writes the chapter on Acute Endocarditis, Diseases of the Valves, Diseases of the Arteries and Aneurism. The section on the prophylaxis of valvular disease is especially commendable. Unusually instructive is Hoover's chapter on the Functional Diseases of the Heart.

Warthin of Ann Arbor has a clear and concise chapter on Diseases of the Lymphatics and also contributes the chapters on the Thymus and Lymphatic Glands in Part III.

One hundred and forty pages are contained in Part II. Cabot, of Boston, writes on Diseases of the Blood. There are a number of plates which bring out the staining of the leucocytes as well as any yet published. Cabot has had a very large experience in this work and the chapters, while not long, are very complete. Pratt, also of Boston, contributes the chapters on purpura and hemophilia. They are well written and bring the subjects up to date in an excellent manner.

Lyon, of Buffalo, describes Diseases of the Spleen, and Warthin, those of the Thymus and Lymphatic Glands. These three chapters comprise Part III.

We understand that this work has had an immense sale. A number equal to five ordinary editions has been sold. There are yet three volumes to appear. Those already issued have been uniformly good.

General Surgery. A Presentation of the Scientific Principles upon which the Practice of Modern Surgery is Based. By Ehrich Lexer, M. D., Professor of Surgery, University of Konigsberg. American edition, edited by Arthur Dean Bevan, M. D., Professor of Surgery, Rush Medical College. An authorized translation of the second German edition by Dean Lewis, M. D., Assistant Professor of Surgery, Rush Medical College. 1 041 pages, with 449 illustrations in the text, partly in color, and two colored plates. D. Appleton and Company, New York, 1908.

This whole volume is devoted to General Surgery, or what Americans are more accustomed to call the Science and Art of Surgery; it does not profess to touch upon Special Surgery, or the Principles and Practice of Surgery. It therefore has opportunity to elaborate the fundamentals of surgery far better than the average sur-

gical treatise, which dismisses the equivalent subjects in a few chapters. Characteristic German system and thoroughness are everywhere in evidence, not without some German ponderousness and repetition; the American editors, Bevan and Lewis, have made a good translation, quite escaping the usual flavor of German translation, and doubtless bettering the original for American readers. Their interpolations, both original and solicited, add further local atmosphere and enhance its value, as perhaps Lexer himself may asknowledge in the next German edition. The chapters on Blastomycosis, by Ormsby, on blood examinations, opsonins, and the Wright vaccination treatment, by Rosenau, and the abstract of Crile's work on transfusion, represent elements hardly mentioned in Lexer's own work. He is, however, generous in his mention of surgery and surgeons in this country, as even a casual perusal will demonstrate.

Probably the greatest value of the work lies in its exposition of surgery from the pathologic viewpoint. In this it is extremely sound, and indicates the trend of the continental surgeon, who approaches all his problems with a better knowledge of pathology and bacteriology than his peers in this country. As is mentioned in the preface, if one possesses a knowledge of the general principles set forth in this volume, he can enter upon special surgery with a sure ability to apply correct methods of thinking to all cases. It is for the most part a treatise on surgical pathology, brought a little closer to its application in diagnosis, prognosis, and treatment.

A more definite idea is gained in reading the headings of the seven parts, viz.—Part I, Wounds, Their Treatment and Repair; Part II, Wound Infections and Surgical Infectious Diseases; Part III, Necrosis; Part IV, Injuries of Soft Tissues, Bones, and Joints, and Their Treatment; Part V, Important Surgical Diseases Excluding Infections and Tumors; Part VI, Tumors; Part VII, Cysts, not Including Cystic Tumors. It will be apparent that repetitions may occur in such an arangement, or else a division of information on any given topic; for example, carbolic acid gangrene is discussed in Part I and Part III, with some duplication; thrombosis and embolsm are described under Part II and Part V. Otherwise the arrangement is logical and comprehensive. Excellent bibliography is scattered through the chapters.

Thorough as Lexer's book may be, it is hardly superior in many respects to the able monographs covering the same subjects in recent extensive surgical treatises written and published by Amercans. It is compact information in one volume, but it is not always so broad, so readable, and so democratic.

Medical Gynecology. By S. Wyllis Bandler, M. D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Octavo of 675 pages, with 135 original illustrations. Philadelphia, W. B. Saunders Company, 1908. Cloth, $5.00 net.

Bandler has written an excellent book along more or less conventional lines, taking up gynecological affections as viewed from the standpoints of symptoms, diseases, bimanual and microscopic findings, and the general physical and nervous state. For the practitioner who does no surgery as well as for him who treats practically all gynecological affections surgically, it is a good book and will repay careful study.

The first section (120 pages) deals with methods of examinations and methods of medical treatment. Methods of examining the urethra and bladder are inadequately given. It is hardly sufficient in a book designed to instruct one on diagnosis to say "the cystoscope should be used." Rather too much importance, it seems to us, is attached to intrauterine therapy. The section dealing with pessaries is good. Local massage is advocated in cases where there are "tender spots due to congestion or gouty exudations," whatever the latter may be. Hyperemia is given due consideration. Galvanism for fibroids is recommended in certain cases, happily in a half-hearted way. Eleven pages are taken up with a consideration of the Nauheim Bath.

Amenorrhea, dysmenorrhea and uterine bleedings are well handled. The treatment of leucorrhea is well set forth and in the gonorrheal form, the methods of Bumm are advocated. Some of the details in the chapter on dysuria are not in accord with present-day knowledge, as, for example, "the bacteria most sought for (in cystitis) are the gonococci and the tubercle bacilli." Nearly all authorities on the bacteriology of cystitis agree that the colon bacillus is the cause of a very large percentage of cases of cystitis. The advice to treat tuberculosis of the bladder locally by a method which takes from one to six months, without any attempt to determine the condition of the kidneys (one of which is practically always tuberculous) is not sound. This the author evidently recognizes for he adds:

"In every case of possible tuberculosis, especially if the cystoscope is not used, or when the cystoscope shows the bladder to be healthy, a specimen of urine should be drawn and sent to a pathologist for guinea pig inoculation."

The chapters on "Associated Nervous Conditions" are extremely good, as are those on gonorhea in children and adults. Other inflammatory conditions, which are well adapted to medical treatment, are fully considered. New growths, whose treatment is essentially surgical, are less fully considered.

The author's style is didactic; his diction, for the most part, good. The illustrations are from drawings by Bosse and are excellent. The proof reading is practically perfect. Like every book put out by this publisher, the press work, paper, and binding leave little to be desired.

The work will probably go through several editions. If so, that small portion relating to the urinary system should be rewritten. A section on appendicitis and another on rectal diseases might properly be added.

On the whole the book can be recommended. Its teaching, with very few exceptions, is sound and methods of diagnosis which every man can learn and employ are advocated. Futhermore it does not require that one be a specialist in order to carry out the recommended treatment.

Pulmonary Tuberculosis and All Complications. By Sherman G. Bonney, M. D., Professor of Medicine, Denver. Octavo of 778 pages, with 189 original illustrations, including 20 in colors and 60 X-ray photographs. Philadelphia, W. B. Saunders Company, 1908. Cloth, $7.00 net.

It is very seldom that a work covering a special subject has met with such favorable criticism as Bonney's Pulmonary Tuberculosis. Without doubt this volume is justly deserving of the praise.

The first 75 pages are taken up with the history and etiology of tuberculosis. The relation of human to bovine tuberculosis is discussed impartially, with the views of the differing noteworthy writers clearly given. The author's conclusions are here happily expressed, and probably agree with those of the majority of clinicians. Modes of invasion are next taken up, and the theory regarding intestinal and respiratory entrance of the germ fully considered. In addition the ever fascinating and much discussed question of hereditary tuberculosis comes up for consideration.

Not as much space is given to the pathology of tuberculosis as might be desired. Some excellent colored plates of gross specimens are included. Under the head of the minute pathology, there is much room for addition, explanations, and illustrations.

Part II is a clinical description of pulmonary tuberculosis. The author makes use of his unlimited experience with the disease, to give accurate, complete, and, at the same time, concise pictures of its various forms. He elaborates on the symptomatology by devoting separate chapters to the effect pulmonary tuberculosis has upon the circulatory, nervous, digestive, and genito-urinary system.

For the student and practitioner alike, the sections devoted to physical examination and diagnosis alone merit the purchase of the book. The author covers in detail, and still in a manner that makes for interesting reading, the methods of diagnosis, that should be at the finger ends of every physician.

Beginning with chapter V., Bonney considers the complications of tuberculosis. First he deals with the acute types, and then the more chronic forms, as they affect the various tissues of the body. It is an excellent section.

The treatment of tuberculosis consumes a large portion of the remainder of the book. From every point Dr. Bonney discusses the important phase of prophylaxis, registration, social relations, segregation, sanitation, education, and many other topics are gone into with accuracy and understanding. Climatic treatment, rest, diet, regulation of effort, both nervous and physical, management of complications, and finally a full discussion of vaccine treatment, together with the author's wide experience in this field, conclude the volume.

The ilustrations are sufficient for a text of this nature and are well executed. The book is well bound and singularly free from typographical error.

Anyone in the practice of medicine, interested at all in tuberculosis in any form, will find it indispensable, both as a volume full of interesting reading and as a text of reference.

Anatomy, Descriptive and Surgical. By Henry Gray, F. R. S., late lecturer on Anatomy at St. George's Hospital, London. New American edition, enlarged and thoroughly revised, by J. Chalmers Da Costa, M. D., Professor of Surgery and Clinical Surgery, and Edward Anthony Spitzka, M. D., Professor of Anatomy, in the

Jefferson Medical College of Philadelphia. Imperial octavo, 1,625 pages, with 1,149 large and elaborate engravings. Price, with illustrations in colors, cloth, $6.00, net. Lea & Febiger, Philadelphia and New York, 1908.

The present edition has so modified the appearance of this anatomic classic that students of ten years ago wll find difficulty in orienting themselves. There are many alterations in arrangement and in the subject matter, not to mention illustrations and typographical improvements. Histology no longer occupies the first chapter of the book, but is scattered through the various chapters under special headings. Many of the old descriptions are still found intact, but many others are materially changed; it is grateful to find that the editors have preserved Henry Gray's clearness and brevity in descriptive writing. Latin nomenclature is given side by side with the English names, which is a recognition of a change that is sure to prevail in time, while bold-face type emphasizes important words on every page. The section on the nerve system makes the subject plainer than the older editions and is supplemented particularly by good pictures and diagrams.

The success attained in keeping Gray's Anatomy up to date renders it a book that is still necessary to every physician's library.

Neurological and Mental Diagnosis. A Manual of Methods. By L. Pierce Clark, M. D., and A. Ross Diefendorf, M. D., New York. Pp. 188. Price, cloth, $1.25. The Macmillan Co., New York, 1908.

This is a handy little volume designed rather to give valuable hints to systematic methods than to impart great knowledge upon the science of diagnosis.

Systematic case-taking, methods of examination with reference to possible lesions of the cranial nerves, the development of trunk and muscles, co-ordination, the reflexes, electrical reactions, sensory tests, aphasia—in short all that pertains to the complete neurological examination are very briefly and elementarily considered in Part I.

Part II is designed to aid the student and practitioner in making and recording examinations of insane patients and in acquainting themselves with the more common forms of insanity. To this end the symptomatology of insanity is briefly gone over, hints given as to systematic examination and a few specimen cases mentioned by way of illustration.

The volume is attractive in size and weight and exhibits those characteristics of Macmillan books, good print and paper.

Photographs illustrate types of the insane. It will serve a useful purpose in giving valuable hints to systematic methods.

Diseases of the Nose, Throat and Ear—Medical and Surgical. By William Lincoln Ballenger, M. D., Professor of Otology, Rhinology and Laryngology, College of Physicians and Surgeons, of Chicago. Octavo, 896 pages, with 467 engravings and 16 plates. Cloth, $5.50 net. Lea & Febiger, Publishers, Philadelphia, 1908.

Ballenger's Diseases of the Nose, Throat and Ear will be hailed by all practitioners interested in these branches of medicine as a distinct advance in text book literature. It is without doubt the most complete and up-to-date treatise upon these subjects in the English language. It is certainly a relief to get away from the old fashioned empirical laryngology handed down from original editions and to receive in its place modern pathology and a rational mode of treatment, based upon such pathology. The press work and illustrations are all that can be desired.

Both to students and practitioners this work can be heartily recommended as the best single volume upon diseases of the ear, nose and throat with which we are acquainted.

Obstetrical Technique. By Joseph B. Cooke, M. D., Adjunct Professor of Obstetrics in the New York Polyclinic Medical School. Sixth edition, enlarged and fully revised. 12 mo., 21 plates and 26 figures. Pp. 258. Philadelphia, J. B. Lippincott Company, 1908.

This well known little book, first issued in 1900, has been a great help to many a young man starting in practice. It has probably done more to elevate the practice of obstetrics and place it upon the plane where it belongs than any other manual. In it the science of midwifery is combined with the art in just such proportions as are most helpful. Every man beginning practice should read it from cover to cover; indeed, the man who has done obstetrical work in an indifferent manner, even for years, would profit by carrying out the many useful hints to be here found.

Diseases of the Skin. By A. H. Ohmann-Dumesnil, A. M., M. E., M. D., Ph. D., etc. Formerly Professor of Dermatology and Syphilology in the St. Louis College for Medical Practitioners, etc. Third edition. Pp. 606, with illustrations. St. Louis, C. V. Mosby Medical Book & Pub. Co., 1908.

This is a well written manual, covering as much of dermatology as is usually required or desired by the general practitioner. The chapters on diagnosis are simple and clear. Diseases are considered under nine divisions: (1) Disorders of Secretion and Excretion, (2) Hyperemias, (3) Inflammations, (4) Hemorrhages, (5) Hypertrophies, (6) Atrophies, (7) New Growths, (8) Neuroses, (9) Parasites.

Exact modes of treatment are plainly set forth and prescriptions often included.

The illustrations deserve criticism. Some have evidently been taken from photographs bought at a circus, for example, that of the "dog faced boy" and the tattooed woman. Others of common diseases are indistinct, as that of psoriasis on page 264. Figure 16 might represent almost anything, quite as well as a double comedo of the chest.

Colorado Souvenir Book. For the International Congress on Tuberculosis. 7x10 in.; pages 192; paper, postage paid. 25 cents. Published by the Colorado State Association, 823 Fourteenth St., Denver.

In past years more consumptives have probably been sent to Colorado than to any other state. Many do extremely well there, while others receive harm rather than benefit from a residence in the Colorado climate. This book contains much information of extreme value both to the physician who is in the habit of sending away his patients and to the patient seeking a place of refuge. In it will be found articles on the climate with reference to tuberculosis, asthma, hay fever, cardiac affections and nervous disorders. Colorado schools, Colorado as a summer resort, as a camping ground, its industries and detailed information as to sanatoria, physicians, etc., are included, making it a book well worth having at hand when required for reference. It is supplied at less than cost price, and copies may be obtained from the State Association at 823 Fourteenth St., Denver.

Obstetrics for Nurses. By Joseph B. DeLee, M. D., Professor of Obstetrics in the Northwestern University Medical School, Chicago. Third revised edition. 12 mo. of 512 pages, fully illustrated. Philadelphia, W. B. Saunders Company, 1908. Cloth, $2.50 net.

The second edition of this book was reviewed in this department last year, and it was stated that this is a little manual of value to the practitioner as well as the nurse. The new edition has been changed but little; nevertheless, it has been improved and can be recommended highly.

Suggestive Therapeutics, Applied Hypnotism and Psychic Science. By Henry S. Munro, M. D., Americus, Georgia. 12 mo., 360 pages. C. V. Mosby Medical Book & Pub. Co., St. Louis, 1908.

Judging from the brief time which has elapsed since the first edition of this book it must have been quite widely read. The preface to the new edition states that it "has been brought up to date by the addition of new material on those phases of the subject upon which advancement has been made during the year." If this is true advancement has been nil, for a careful comparison, page for page, of the two editions reveals two changes, one of 21 lines and one of 32. These alterations (the number of pages and number of lines in the two agree exactly) are of little importance. Why do authors and publishers try to fool us with the "new and revised edition" scheme?

The index has been improved.

International Clinics. Eighteenth Series, Vol. III. Edited by W. T. Longcope, M. D. Pp. 298; illustrated. Philadelphia, J. B. Lippincott Co., 1908.

Among the 25 papers comprising this number are several of special interest. Tissier, of Paris, reports 117 cases of pertussis treated with fluoroform in aqueous solution. Almagi and Mendes, of Rome, describe two cases of tetanus treated with subcutaneous injections of cholesterin. Both recovered and they are inclined to believe that cholesterin fixes the toxin and prevents it from reaching the central nervous system.

Scott contributes a well illustrated study of perforation in typhoid. Melanotic neoplasms are described by Gibbon and Despard. There are several good papers on pediatrics and orthopedics. The Harvey Lecture entitled, "On the Trail of the Subconscious," by Jastrow, Professor of Psychology at Wisconsin, is included and is a valuable contribution.

The four volumes of International Clinics,

which comprise a year, contain over 100 papers, for the most part by men of authority. We believe that the publishers would do well to prepare a general index, in order that these papers may not become forgotten.

The Physicians' Visiting List for 1909. Leather, arranged for 25 patients per week, $1.00; for 50 patients, $1.50. P. Blakiston's Son & Co., Philadelphia, 1909.

For fifty-eight years the publishers of this visiting list have put it upon the market, and many a doctor would feel lost were its publication discontinued. It has many excellent features, among them its convenience, its durable binding, its excellent paper, and its admirable arrangement. Its use simplifies bookkeeping. Altogether it is the best of its kind.

The Practitioners' Visiting List for 1909. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years. Price by mail, postpaid, to any address, $1.25. Lea & Febiger, Philadelphia.

This visiting list contains a scheme is dentition, tables of weights and measures, instructions for urine examination, tables of eruptive fevers, poisons and antidotes, etc. The ruled portions consist of various blanks, adapted for noting all details of practice.

This is the twenty-fifth annual number.

County Society News

Grand Traverse.

At the annual meeting of the Grand Traverse County Medical Society, held November 4, 1908, the following were elected officers of the society for the ensuing year: Dr. F. P. Lawton, President; Dr. E. B. Minor, Vice President; Dr. J. W. Gauntlett, Secretary-Treasurer.

Gratiot.

The annual meeting of the Gratiot County Medical Society was held at Alma November 19, 1908, at which time a goodly number of the medical fraternity were present. Two papers were read, one by Dr. N. F. McClinton, of Alma, on "Prostatitis," Acute and Chronic, and one by Dr. E. T. Lamb, of Alma, on "Acute Bright's Disease." Both papers were good and were much appreciated by the members present. The following resolution was offered and adopted:

Whereas, The people of Gratiot County, in passing the Local Option Law, have incidentally expressed their confidence in medical men to respect their wishes; now, therefore, be it

Resolved, that we, the members of the Gratiot County Medical Society will not prescribe liquors in any case unless we are satisfied they are to be used medicinally.

The officers for the ensuing year were elected as follows: President, Dr. J. N. Day, of Alma; Vice-President, Dr. George W. Petty, of St. Louis; Secretary-Treasurer, Dr. W. M. Drake, of Breckenridge; Member of Board of Censors, Dr. Stiles Kennedy, of St. Louis.

Refreshments were served to the members of the society by the resident physicians after adjournment.

J. N. DAY, *Retiring Sec'y.*

Ionia.

The Ionia County Medical Society held its annual meeting in the Town Club rooms at Ionia, on the afternoon of November 19th.

The following were elected officers for the coming year: President, C. F. Beckwith, Ionia; First Vice-President, T. R. Allen, Ionia; Second Vice-President, George More, Ionia; Third Vice-President, W. R. Grant, Lyons; Fourth Vice-President, J. D. Bradfield, Orange; Secretary-Treasurer, C. S. Cope, Ionia; Censors, R. W. Alton, Portland; J. F. Pinckham, Belding; C. B. Gauss, Palo; Delegate, C. S. Cope, Ionia; Alternate, J. E. Ferguson, Belding.

The time of meeting was changed from quarterly to monthly, with the second Thursday of each month as the day and Ionia as the place of meeting.

C. S. COPE, *Sec'y.*

Isabella-Clare.

The sixth annual meeting of the Isabella-Clare County Medical Society was held October 21, 1908, in the Maccabee hall of Mt. Pleasant.

Election of officers: President, Dr. C. E. Goodwin, Shepherd; Vice-President, Dr. B. F. John-

son, Rosebush; Secretary-Treasurer, Dr. S. E. Gardiner, Mt. Pleasant; Delegate to State Society, Dr. James McEntee, Mt. Pleasant; Alternate to State Society, Dr. C. M. Baskerville, Mt. Pleasant; Directors, H. V. Abbott, Shepherd, 3 years; C. D. Pullen, Mt. Pleasant, 2 years; A. T. Gatchell, Mt. Pleasant, 1 year.

After the regular business meeting, the society was addressed by Dr. E. B. Smith, of Detroit, the subject of the lecture being "Fractures." Dr. Smith gave a very valuable lecture, illustrating the use of various dressings and splints on a living subject.

At 7:00 o'clock a banquet was served at the Hotel Bennett. The dinner was followed by short speeches, short stories, and poetic selections. Plates were laid for the following persons: Dr. and Mrs. Adams, Dr. and Mrs. Baskerville, Dr. and Mrs. Gardiner, Dr. and Mrs. Getchell, Dr. and Mrs. McEntee, Dr. and Mrs. Pullen, Dr. Richmond, all of Mount Pleasant, Dr. and Mrs. Goodwin of Shepherd, Dr. Smith of Detroit, Dr. McRea of Beal City, Dr. Johnson of Rosebush, Dr. Burch of Gladwin, Drs. Day and Brainard of Alma.

S. E. GARDINER, *Sec'y.*

Presque Isle.

At the annual meeting of the Presque Isle County Medical Society, held at Onaway, November 4th, the following officers were elected: President, Wm. W. Arscott, Rogers City; Vice-President, C. A. Carpenter, Onaway; Secretary, L. C. Kent, Onaway; Delegate to State Society, V. W. Shirley, Onaway; Alternate, Fred P. Nevins, Posen.

L. C. KENT, *Sec'y.*

News

A dinner at the Detroit Club, Thursday evening, Nov. 19, attended by 20 men from Kalamazoo, Flint, Pontiac, Dearborn, Ann Arbor, Ionia, Toledo and Detroit, was made the occasion for the organization of the Detroit Society of Neurology and Psychiatry. It is to meet four times a year and to devote its energy to the study of neurological and psychiatrical problems. The society comes into existence with thirty charter members and the following officers:

President, Dr. C. B. Burr, Flint, Mich.; vice-president, Dr. David Inglis, Detroit, Mich.; secretary-treasurer, Dr. Charles W. Hitchcock, Detroit, Mich. The officers with the two following form the Council: Dr. A. M. Barrett, Ann Arbor, Mich., and Dr. E. A. Christian, Pontiac, Mich.

After the dinner and prior to the ceremonies of organizing, Drs. Inglis and Klingmann presented an interesting case, a probable tumor of the spinal cord.

Dr. Francis Jones has been appointed surgeon for the Grand Trunk Railway at Potterville, to succeed Dr. R. A. Locke, resigned.

Dr. R. S. Copeland's resignation from the faculty of the Homeopathic department in Ann Arbor has been accepted.

Dr. George W. Stewart has been elected mayor of Saginaw on the Republican ticket. He is 43 years old, a member of the county and state societies, and a graduate of the Medical Department of the University of Michigan.

An epidemic of scarlet fever has broken out at the University Hospital in Ann Arbor; every patient who has not been exposed has been moved to the general hospital; those who were exposed are housed in outlying cottages. Strict quarantine is established; senior medical students excused from clinics; a special corps of physicians are attending the cases.

The Shurly Building in Detroit, exclusively for physicians, owned by Dr. E. L. Shurly, was damaged by fire on October 4th. The chief losers were Mr. Seltzer, the druggist, in whose store in the basement the fire started; Mr. Kuhlman, the instrument dealer; Drs. E. L. and B. R. Shurly, W. P. Manton, C. D. Aaron, Eugene Smith, and P. M. Hickey.

Dr. George Dock, formerly of Ann Arbor, now Professor of Medicine at Tulane University, New Orleans, is giving a course of lectures, open to the profession of the city, on "The Diseases of the Ductless Glands." They will be given weekly until February first.

The Jackson County Society has published a neat booklet giving an outline of the post-graduate work for the winter.

Dr. W. M. Donald, of Detroit, gave an address before the Livingstone County Medical So-

ciety at Howell, September 26th, upon "Artereosclerosis," and before the O. M. C. O. R. O. Medical Society at West Branch, October 21st, upon "Vascular Degenerations."

Dr. F. A. Roberts and Dr. Paul Rose, of Flint, have dissolved the partnership that has existed for a year and a half; the former will remove to offices over the Genesee County Savings Bank, recently occupied by Dr. E. R. Campbell.

Dr. W. F. Waller, recently resident in Hillsdale, has located for practice in Frontier.

The annual ball for the benefit of the Woman's Hospital in Saginaw was given the evening of Thanksgiving Day.

Dr. G. W. Shipman, formerly of Detroit, has located in St. Johns.

Dr. W. F. English, of Saginaw, is seriously ill as the result of an accident on Nov. 13. In responding to a night call, when driving his automobile across a bridge, the draw was open, without gates or lights, and the machine plunged into the river. A tug effected a rescue.

Dr. E. R. Campbell, of Flint, has given up practice, and will go into business with the Buick Motor Company.

An epidemic of measles in Frankfort has necessitated the closing of schools.

Dr. L. E. Knapp, of Fenton, suffered a stroke of apoplexy, while attending a patient in his office, Nov. 4.

It is said that over 11,000 tons of foodstuffs, valued at $1,500,000, have been destroyed by the food inspectors of Greater New York within a year. The larger part of this was fruit, vegetabes, and canned goods.

The Waldorf-Astoria hotel in New York has opened an emergency surgical ward, primarily for the use of its guests, but also, in case of necessity, for temporary accommodation to ambulance surgeons.

Dr. Edward Moriarity, of Mt. Clemens, sailed for Germany on Oct. 22.

Dr. Bertha S. Stuart has been appointed medical director of the Barbour Gymnasium, Ann Arbor.

Cattle in Wayne County have been discovered to have foot and mouth disease, and vigorous measures are in progress to prevent its progress.

Dr. W. H. Force, a graduate of Detroit College of Medicine, 1908, is practising at Ludington.

Dr. J. O. Keho, recently of Merrill, has removed to Bay City.

Dr. R. M. Woodward has come from Boston to fill the position of surgeon in charge of the U. S. Marine Hospital in Detroit, succeeding Dr. Fairfax Irwin, who was assigned to duty at Arundell Cove, Md., some weeks ago, and who will accompany the new revenue cutter Snohomish in a trip around South America.

The Detroit Society for the Study and Prevention of Tuberculosis, from the receipts of Tuberculosis Charity Day, has organized a system of relief and assistance for persons suffering from pulmonary tuberculosis and extends a cordial invitation to make use of these means for any patients who may be under care for this disease.

The city is divided into districts and for each district there is a visiting nurse. This nurse will be entirely under the doctor's direction in regard to any cases she may visit and will furnish the following things: 1. Usual visits, nursing care, baths, attention to various details of sick-room, instructions in preparing food, etc. 2. Medicines prescribed by the doctor. 3. Sputum cups. 4. Fresh air apparatus, window tents, outside balconies, etc. 5. Instructions in methods of preventing infection of others. 6. Milk and eggs.

Attention is called to the fact that the City Board of Health now examines sputum free, and furnishes jars for collecting same.

In case of indigent patients whose care is inconvenient for the doctor, at our request, medical care will also be furnished. There are a limited number of beds at the Detroit City Tuberculosis Hospital on Hamilton Boulevard.

The Poor Commission has made an appropriation for the improvement and extension of facilities for the care of cases of tuberculosis at Eloise.

The society hopes to be able to do a good deal in the way of educating the public to consult physicians early enough in this disease to enable the treatment to be successful. To this end they will use various methods and cordially invite cooperation (1) by joining the society and (2) by commending the work to patients.

Marriages

H. L. Lown, M. D., to Mrs. Laura Astley, both of Grand Ledge, November 10.

John E. Gleason, M. D., to Miss Eleanor M. Hovey, both of Detroit, Noevmber 24.

William D. Whitten, M. D., Baltic, to Miss Gertrude Connor, at Chicago, November 3.

Charles B. Stockwell, M. D., Port Huron, to Mrs. Eva Knaus, Montour Falls, N. Y., at Montour Falls, October 21.

Deaths

Joseph Runtz Hooper, M. D., of Elkton, died suddenly at his home, August 29, from angina pectoris, aged 59.

James C. McBean, M. D., house physician of the West Side Hospital, Detroit, died September 16, from injuries received in an automobile accident, aged 38.

Lewis P. Way, M. D., of New Baltimore, died at his home, September 6, from typhoid fever, aged 54.

Dr. Mary Clark, for many years a practitioner in Battle Creek, died at her home May 31.

John D. Cameron, M. D., of Iron Mountain, died at his home, September 27, from heart disease, aged 57.

Dr. G. V. Randall, of Tecumseh, died, after an illness of three weeks, Nov. 25th. Dr. Randall was a graduate of the University of Michigan and Rush Medical College, and was in his 49th year. He was a member of the Lenawee County and State Medical societies.

Dr. R. J. Shank, a member of the Ingham County Medical Society, died suddenly at his home in Lansing, Nov. 25th, aged 60 years.

Dr. James H. Reed, of Battle Creek, died suddenly Nov. 26th. He was a member of Calhoun County and the State Medical Society.

Lewis T. May, M. D., of New Baltimore, a practicing physician for 25 years, died at his home, Sept. 14, from typhoid fever.

Seymour A. Johnson, M. D., of Kalkaska, for many years a respected and successful practitioner, died at his home, November 5, from cancer of the face and neck, aged 60.

William H. Andrews, M. D., for 31 years a practitioner of Fennville, died at his home, September 22, aged 68.

Charles William Foobridge, M. D., a graduate of the University of Michigan Medical Department in 1877, formerly a practitioner of Northern Michigan, but recently physician to the Red Jacket mine in Montana, died in Helena, Mont., October 16, aged 61.

David Donald Duggan, M. D., died at his home in Battle Creek, November 2, from paralysis, aged 33.

George S. Darling, M. D., Tawas City, probbably the oldest practitioner in Iosco County, died in Detroit, October 27, from cancer of the throat.

Charles W. Harwood, M. D., a graduate of the Detroit College of Medicine, died at his home in Sandwich, Ontario, April 6, from pneumonia, aged 63.

Engelbert Frenz, M. D., a well known German practitioner of Saginaw, died in St. Mary's Hospital, November 6, from diabetes, aged 68.

Robert Henry Blaisdell, M. D., of Sheridan, died at his home, August 30, after a long illness, aged 58.

Le Grand Wheeler, M. D., died at his home in Wolf Lake, August 30, aged 76.

The January meeting of the Council will be held at the Hotel Cadillac, Detroit, on Thursday, the seventh of the month. The meeting this year is of unusual interest and importance for two reasons; first, because the question of the State Society taking up the medical defense of its members will be considered, and, second, because matters concerning medical bills in the legislature will come up for discussion.

Every county society has been asked to consider in a general way, whether or not its members are in favor of establishing medical defense, a $3.00 assessment to be paid in 1909 and $1.00 yearly thereafter. If sentiment in favor of it is reported the Council will submit a plan, details of which will be sent county societies so that delegates to the annual meeting may be instructed.

According to recent amendments to our by-laws, all legislative questions must first be passed upon by the Council, before taken up by the Committee on Legislation and Public Policy. The optometry bill and the bill for the registration of nurses will be considered.

The councilors will be glad to confer with any members regarding any of these questions, before its January meeting.

Progress of Medical Science

SURGERY

Conducted by

C. S. OAKMAN, M. D.

The Surgery of the Hypophysis. (Pituitary body.) R. PROUST reviews the literature on this subject, mostly of recent date, under three headings:—first, the means of access to the hypophysis; second, the diagnosis of tumors affecting it; third, the results obtained by operation.

The methods of approaching the hypophysis are by the intracranial route, temporal or frontal, and the extra-cranial route, attacking the part through the sphenoid sinus, which is reached by a bucco-nasal, an inter-maxilary, or a nasal incision. The intra-cranial route is impracticable, because of its difficulty, and the danger to brain and large vessels and nerves in relation to the sella turcica. Of the extra-cranial methods the nasal route gives the best approach; the patient is put in the dorsal or the Rose position, the nasal fossae cleaned as well as possible, and the whole nose dissected free, from root to alae, including bone section, and turned downward, with the naso-labial junction acting as the hinge. The frontal sinuses are opened freely, the ethmoid cells opened and entirely removed, with considerable of the vomer, thus exposing the body of the sphenoid, which is then penetrated. This leaves nothing but the cranial wall of the sphenoid sinus and the dura between the operator and the hypophysis; these are carefully traversed and the operation completed according to the pathological conditions found.

The diagnosis of affections of this region is dependent first, upon Roentgenography, which reveals alterations of the sella turcica; second, upon ocular troubles, significant of compression of the chiasm; third, upon the acromegalic syndrome, or the "degenerescence adiposogenitale," of Froelich, due to disturbance of function of the hypophysis. Alterations in the sella turcica are constant in tumors of the pituitary body, and consist in deepening of the bony depression, with accentuation and thickening of its borders, or a flattening of the depression and widening of the entrance. The radiogram shows these changes and also shows the conformation of the bones and sinuses which have to be traversed in operation. Ocular troubles are due to the fact that the chiasm rests upon this region; any growth causes pressure on the chiasm, first of all on the fibers supplying the nasal side of the retina, and producing hemianopsia, improperly designated "bitemporal hemianopsia." Papillary stasis is not a symptom, but a gradual optic atrophy is noted, chiefly nasal. The acromegalic syndrome is manifested by hypertrophy of the feet, hands, face, thickening of the bones, distension of the sinuses. In certain cases hypophysary tumors produce signs of only an early acromegaly, accompanied by an intense diabetes, such as the case reported by Chauffard and Ravaut. Later stages cause attacks of violent headaches and vomiting. The headaches and pronounced ocular symptoms have heretofore been considered the indications for operation, but Hochenegg thinks there are further possibilities, after having noted a pronounced retrogression of acromegalic symptoms following hypophysectomy. He believes that this disease is due more likely to a hyperfunctionating of the pituitary body, than to a hypofunctionating. In this connection, however, it should be remembered that that gland must *never* be *totally* removed; in experiments upon animals a total ablation is invariably fatal, but a partial removal may succeed.

There have been six cases of hypophysectomy by the nasal route, as follows: Schloffer, 1; Von Eiselsberg, 3; Hochenegg, 1; Bouchardt, 1. Three were undertaken for tumors of the pituitary body, accompanied by "degenerescence adiposogenitale" and troubles due to compression; they resulted in an amelioration of the headache in all, but the eye symptoms were improved in only one; the trophic changes showed a slight betterment in two. Two operations were for tumor, accompanied by acromegaly; one resulted fatally, from infection; the other showed a notable improvement. The sixth case lacked details.—*Journal de Chirurgie,* Paris, October, 1908.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

A New Sign for the Detection of Malingering and Functional Paresis of the Lower Extremities.—Hoover's sign published in August and prviously described in these columns (pages 522, Oct. No.) has now been tried by Zenner of Cincinnati in two cases: first, that of a tumor of the pons in which the right leg was absolutely paralyzed and the left entirely normal. When he lifted the left leg, there was not the least movement of the other but when he tried to lift the paralyzed leg, there was complemental opposition of the sound leg, the heel digging into the couch. Second, in the case of a woman, always easily affected by the sight of blood, the sight of a patient just operated on and upon whom some blood was to be seen, induced an hysterical hemiplegia (right) a half an hour later. Four days later, when the test was applied, there was complete right hemiplegia, blindness of the right eye, deafness of the right ear, and loss of smell in right nostril. When told to lift the right, the paralyzed, leg or to try so to do, there was no complemental opposition of the sound leg,—no movement of either being detected. When, however, she lifted the sound leg,—the complemental opposition was plainly present, the heel digging into the bed.—Philip Zenner in *Journal A. M. A.* for Oct. 17th, 1908.

The Pathogenesis of Tabes Dorsalis.—An article upon this subject thus summarizes its conclusions:

"1. Tabes dorsalis is a secondary degeneration in the posterior columns, due to a chronic meningitis, very probably of syphilitic nature.

2. The arrangement of the meninges surrounding the radicular nerve renders it peculiarly susceptible at that spot to mechanical or toxic injury.

3. The unequal incidence of the affection upon different fibers of the posterior root is probably due to unascertained peculiarity of structure or arrangement of fasciculi, rather than to any selective toxic influence.

4. The lesions tend toward resolution and arrest, even though the process may continue during the life of the individual.

5. With this arrest, regeneration tends to occur in the radicular nerve, the amount in the anterior root being relatively considerable while that in the posterior root is less in amount and functionally insignificant, as a rule.

6. The otherwise inexplicable vasomotor and cranial nerve symptoms and postmortem findings in this disease are shown thus to be necessary concomitants of the tabetic process.

7. The question of the pathogenesis of the polyneuritic manifestations found in tabetics is not yet answered."—Tom A. Williams in *Amer. Jour. Med. Sci.* for August, 1908.

The Course and Progress in Disseminated Sclerosis.—Four cases are here cited as illustrative of the varied course of disseminated sclerosis and as indicative of the caution which one should practice in giving an unfavorable prognosis. The author incidentally refers to recurrent attacks in a lady (then 45) which had occurred at intervals since she was 34. The practically complete recoveries had militated against a diagnosis of other than a functional trouble and yet on several visits there was a distinct bilateral Babinski reflex, with absence of abdominal and epigastric reflexes and her later attack was much deeper than had been its predecessors.

In his first case there had been a rapid development of paralysis within three weeks, with diplopia, nystagmus and great mental disturbance. Here there was a gradual recovery in six weeks.

In the second, optic atrophy had been known for two years without other symptoms. An attack of sudden giddiness was followed by marked paralysis deepest at the end of a fortnight. There was apparent complete recovery.

The third case was that of a girl of 22 whose illness of about eight years resulted toward the end of the seventh year in a spastic paralysis with inability to stand. Marked progress toward recovery for nearly a year, then rapid onset of bulbar symptoms and death within a week.

His fourth case had deficient vision and attacks of giddiness two years before this illness which had lasted a year. Then, three months after an acute illness loss of power rapidly developed on left side. There was nystagmus and pallor of right disc, intention tremor of right arm, increase in paralysis of all the limbs as also of intercostal and abdominal muscles and loss of knee-jerks. Sensation was later disordered, then improvement in upper limbs, marked spastic paralysis of lower limbs remaining, but ability to stand. Acutely threatening symptoms persisted for three weeks.

Other cases are referred to in which the progress toward apparent recovery was far less marked than in the cases cited above.—W. B. Warrington in *Review of Neurology and Psychiatry* for Sept., 1908.

PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

Interpretation of Blood Examinations.—WILE makes a plea for blood examinations that they be considered as an aid to diagnosis, an adjunct like urinalysis, and that all other data be considered with a blood examination in making a diagnosis.

The different classifications of leucocytes used by various writers are confusing. For practical purposes it is sufficient to group all the lymphocytes under one head, while the polynuclear cells are idvided into neutrophiles, eosinophiles and basophiles. In addition we sometimes have the myelocyte. These five one should be able to recognize.

Blood counts in children are frequently misinterpreted because it is not known that the relative number of the different types of cells varies with the age of the child. WILE gives the following table of average proportions in normal chidren:

Age.	Percentage Polynuclear Neutrophiles.	Percentage Lymphocytes.
1	35	53
2	38	51
3	42	47
4	47	41
5	52	39
6	52	37
7	53	35
8	54	33
9	55	31
10	60	30

The importance of the relation between absolute count and the relative percentage of polynuclears is emphasized. In general terms the percentage of polynuclear neutrophiles is the relative index of intensity of infection. The total leucocyte count is an index of individual resistance tt infection. Thus a high leucocyte count with a low polynuclear percentage in less serious than a low total count with a high percentage of polynuclears.

No diagnosis, the author concludes, save of parasites, should be based simply on a blood examination. That is to say, while hematology offers a wonderful diagnostic agent it does not *per se* offer a diagnosis.—*Medical Record,* Vol. 74, p. 709.

Tumors of the breast in Childhood.—Under the above title Jopson, Speese, and White present a review of the cases of tumors of the breast occuring in childhood that have been reported in the literature and add the report of two cases coming under their own observation. A majority of those tumors are benign in character and may be divided into two classes, those vascular in origin and those not vascular in origin. The vascular tumors exist as cutaneous, subcutaneous, or intraglandular. The cutaneous variety have the characteristic of naevi occurring elsewhere. The subcutaneous variety are small, nodular, circumscribed, and the overlying skin is healthy. In the case of the intraglandular forms we have true angiomata. The growth may be diffuse or encapsulated. Both sexes are affected and the growth appears in the earliest months of life. If degeneration of the tumor occurs cysts may be present. In some cases the tumor is erectile and painless with the overlying skin normal except for a few enlarged veins.

As to treatment the authors state that the small superficial vascular tumors may be destroyed by the cautery but the larger and more deeply situated ones require removal and in some instances the entire breast may have to be sacrificed.

Benign tumors not vascular in origin may be of various types, commonly fibro-adenoma, lipoma, or cyst.

Twenty-one cases are reported of benign tumors of the breast occurring under the age of sixteen. Of these eleven were fibro-adenomata, six angiomata, one fibro-lipoma, one lipoma, one simple cyst, and one in which the diagnosis was not given. Statistics are given on the age, sex, duration, breast involved, location of the tumor in the breast, result, etc. It is interesting to note that there was involvement of the lymph-nodes reported in three cases. In eleven of the twenty-one cases the entire breast was removed.

In considering malignant tumors the statement is made that it is doubtful if any well authenticated case of carcinoma of the breast under sixteen years of age has been reported. Sarcoma is also very rare. The literature, however, contains the records of six cases.

Conclusions—

1. Tumors of the breast while rare in childhood, occur in both sexes and at all ages.

2. The fibro-epithelial growths are the most numerous groups and next come the angiomata.

3. Sarcoma of the mammary gland may occur but is rare. The breast enjoys almost complete immunity to carcinoma before the age of puberty. —*Annals of Surgery,* Vol. 48, page 662.

GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

Analysis of the Symptoms in Forty Cases of Suppuration of the Pelvis of the Kidney.—A. L. CHUTE reviews his own experience. He admits that the tabulation of a larger number of cases might give somewhat different percentage figures. He finds that of his own cases, less than one-half (42.5 per cent) with a history of lumbar pain, or a little over one-quarter (28.5 per cent) could he detect any enlargement of the diseased kidney. Tenderness was present in 38.5 per cent. Casts appeared in 17.5 per cent. Eleven of the forty cases (27.5 per cent) presented neither pain, appreciable renal mass, tenderness or casts. The constant sign is the turbid urine. His next most frequent sign is a disturbance in micturition (85 per cent). Both these symptoms also occur almost constantly in conditions limited to the bladder. In this particular series in 27.5 per cent only these two signs were present. In view of the lack of distinctive symptoms in man renal suppurations and the absolute unreliability of negative findings in these cases, the vast importance of cystoscopy in the study of urinary suppurations is at once obvious.—*Boston Med. and Surg. Journ.*, Sept. 17, 1908.

Acute Hematogenous Infection of One Kidney in Persons Apparently Well.—FARRAR COBB says that it is not well understood as yet by the profession that in persons apparently in good health septic infarcts of the kidney may be caused by bacteria, usually colon bacilli, circulating in the blood, and that the acute cases of this form of hematogenous infection can present a typical picture of certain of the grave abdominal emergencies,—appendicitis, cholecystitis or visceral perforation, with abdominal tenderness and rigidity, vomiting, high pulse, temperature and leucocytosis.

These infections while comparatively rare are not so infrequent as past experience would show. In all probability they have not been recognized in the early stages of the infection. The author's experience since 1902 includes six cases, one of them operated upon twice, and in the four months from October to February last two cases were opearted upon by Dr. Conant, one by Dr. Harrington and three by himself. Johnson analyzed all the cases of surgery of the kidney at the Roosevelt Hospital for eight years preceding October 1, 1908. There were twelve cases operated upon for abscess of the kidney, all but three of which had an undoubted origin in ascending infection and pyelitis. In only three cases was it at all probable that acute hematogenous infection of the kidney had been the origin of the abscess.

Infection of the kidney may be ascending, the urogenous type, or an infection from the blood, the hematogenous type. It may take place also through wounds or by extension from other abscesses in the immediate vicinity of the kidney. In any condition where bacteria are plentiful in the blood stream or in general infectious diseases or where local sepsis exists, hematogenous infection of the kidney can occur provided conditions favor it.

In persons apparently well the onset is usually acute and without warning. The course of the disease may be rapid, with increasing toxic symptoms, or after an acute onset the patient may go for weeks or months in a septic condition. The very acute cases are the ones which simulate most closely abdominal infections.

The chief points of interest in this important condition are the cause, the source and kind of infection and the diagnosis. Some abnormality in the kidney or ureter is the probable cause of the arrest of the bacteria. The infecting bacteria are almost always arrested in the terminal vessels of the cortex close to the fibrous capsule. The blood vessels become choked with microorganisms. Blood passes into the interstitial tissues and in this stage of infiltration, the earliest stage, the infected areas resemble true hemorrhagic infarcts. As the infection goes on a true abscess is formed, separated from the sound tissue by a hemorrhagic margin. The infected areas then resemble minute pus points or septic infarcts. The condition has been aptly named by Dr. Whitney, Surgical Pathologist to the Massachusetts General Hospital, "focal suppurative nephritis."

The colon bacillus is the most frequent form of urinary infection, whether of the kidney or of the bladder. It is now well known that the colon bacillus, under certain conditions, has virulent pathogenic properties; that it is a true pyogenic organism.—*Annals of Surgery*, Nov., 1908.

INDEX

VOL. VII

JANUARY TO DECEMBER, 1908

O. Original Article. Ed. Editorial. ab. Abstract.

PAGE

A

Abdominal Pain: Its Diagnostic Significance. H. W. Yates. O. 237
Abrams, E. T. Asepsis in Obstetrics. O..... 498
Abscess, Sub-periosteal in an Infant. Emil Amberg. O. 336
Acetonaemia, Conditions of Children. ab..... 40
Acetone Bodies, Method of Estimating. ab..... 270
Advertised, If Physicians. Ed..... 631
Albuminuria, Calcium Chloride in. ab..... 209
Etiology of Cyclic. ab..... 270
Alimentary Tract, A Complete, Practical and Brief Examination of. W. H. Enders. O..... 232
Amberg, Emil. Cases of Oto-Anthritis, Sub-periosteal Abscess, Pseudo-Cholesteatoma, Exostosis and Artificial Drum Membrane. O..... 336
Amenorrhea. R. R. Smith. O..... 17
American Med. Assoc., Meeting of..... 365
America's Contributions to Science. Ed..... 182
Anatomik Footwear Company. Ed..... 630
Anderson, W. S. Neglected Fields in Medicine. O. 604
Anthracosis, First Stages of. ab..... 272
Aortic Insufficiency, Pulse and Blood Pressure in. ab. 207
Aphasia. ab. 41
Appendicitis, Leucocyte Count in. ab..... 142
Appendix, Carcinoma of. ab..... 272
Archives of Internal Medicine. Ed..... 25
Arteriosclerosis. ab. 40, 41
In the Young. ab..... 144
Arthritis, Gonorrheic. ab..... 378
Arythmias Cardiac. H. A. Freund. O..... 501

B

Ballin, Max. Gastric Disturbances Caused by Hernia. O. 91
Banti's Disease. ab..... 210
Bier's Hyperemia, Criticism of. ab..... 520
Biliary Surgery, Remarks on. Hal C. Wyman. O... 342
Birth Registration, Compensation for. Ed..... 126
Blood Examinations, Interpretation of. ab..... 643

BOOK NOTICES—

Abrams: The Blues..... 464
Anders: Practice of Medicine..... 129
Ballenger: Diseases of Nose, Throat and Ear.. 635
Bandler: Medical Gynecology..... 633

PAGE

Barnhill and Wales: Modern Otology..... 259
Baumann: Gonorrhea 363
Benedict: Golden Rules of Dietetics..... 412
Bishop: Heart Disease and Blood Pressure.... 31
Blair: Modelling of Bones..... 464
Bonney: Fulmonary Tuberculosis..... 634
Church and Salinger: Diseases of Nervous System 78
Clark and Diefendorf: Neurological and Mental Diagnosis 635
Colorado: Souvenir Book 636
Cooke: Obstetrical Technique..... 635
Crossen: Diagnosis and Treatment of Diseases of Women 463
Davis: Consumption; Its Prevention and Cure Without Medicine 413
De Lee: Obstetrics for Nurses..... 636
Egbert: Hygiene and Sanitation..... 31
Foote: Text Book of Minor Surgery..... 259
Goepp: State Board Questions and Answers.... 413
Gray: Anatomy 634
Greene and Brooks: Diseases of Genito-Urinary Organs and the Kidney..... 128
Hardaway and Grindon: Cutaneous Therapeutics 32
Hare: Text Book of Practical Diagnosis..... 128
Howell: Text Book of Physiology..... 127
Horwitz: Compend of Surgery..... 78
International Clinics.....130, 365, 465, 636
International Medical Annual..... 257
Keen: Surgery. Vol. III..... 257
Kelly: Medical Gynecology..... 462
Kerley: Treatment of Children's Diseases..... 77
Kerr: The Baby..... 550
Keyes: Syphilis 463
Kyle: Diseases of the Nose and Throat..... 364
Leonard: Reference and Dose Book..... 464
Lexer-Bevan: General Surgery..... 632
MacMillan: Chronic Constipation and Allied Conditions 302
Mellin's Food Co.: Method of Percentage Feeding 464
Meyer and Schmieden: Bier's Hyperemic Treatment 257
Miller: The Correction of Featural Imperfections 131
Munro: Suggestive Therapeutics.....464, 636
Nothnagel: Diseases of the Peritoneum and Intestine 511
Nothnagel-Dock: Diseases of the Heart..... 362
Ohmann-Dumesnil: Diseases of Skin..... 636

PAGE

Ortner: Treatment of Internal Disease..... 511
Osler and McCrea: Modern Medicine.....126, 632
Park: Principles and Practice of Surgery..... 77
Potts: Nervous and Mental Diseases..... 302
Progressive Medicine.....78, 259, 365
Ramsay: Practical Life Insurance Examinations 412
Robson and Cammidge: The Pancreas..... 549
Rose: Medical Greek..... 549
Sajous: Internal Secretions and Principles of Medicine 127
Scott: The Sexual Instinct..... 131
Scudder: The Treatment of Fractures..... 258
Selter-Rich: An Introduction to the Study of the Infant's Stool..... 363
Sobotta-McMurrich: Human Anatomy. Vol. III. 364
Stelwagon: Diseases of the Skin..... 130
Stevens: Manual of Fractice of Medicine..... 32
Talmey: Woman 131
Thompson: Glimpses of Medical Europe..... 302
Visiting List, Physicians'.....32, 637
Visiting List, Practitioners'..... 637
Von Neusser: Disorders of the Respiration and Circulation 364
Von Noorden: Metabolism and Practical Medicine 258
White: Outlines of Psychiatry..... 302
Wilbur: Mortality Statistics, 1906..... 512
Williams: Obstetrics 30

Breasts, Inequality of the Two. ab..... 521
Brown, G. V. Conservatism in the Surgery of the Uterine Adnexa for the Preservation of the Possibility of Pregnancy. O..... 449
Buttermilk as a Food. Ed..... 298

C

Camp, C. D. Hysteria, Neurasthenia, Hypochondria and Simulation, The Distinction Between. O..... 531
Cancer, Electricity in Treatment of. ab..... 472
Etiology and Trypsin. ab., 88. Ed..... 124
Problem, The. Ed..... 358
Canfield, R. B. A Case of Otitic Meningitis. O.... 53
Carcinoma, Early Recognition of Uterine. ab..... 208
Of Appendix. ab..... 272
Of Female Urethra. ab..... 379
Of Pancreas. H. M. Joy. O..... 149
Carotid Gland. ab..... 473
Carstens, J. H. Dr. N. W. Webber. Obit..... 371
Cerebral Decompression. ab..... 585
Chapman, V. A. The Surgical Treatment of Acute Otitis Media. O..... 477
Chart, Bed Side, Who Owns the. Ed..... 182
Children, Ocular Faults in. ab..... 89
Cholesteatoma Pseudo, Case of. Emil Amberg. O.. 336
Christian Science, A Reprint Concerning. Ed..... 75
Connor, Leartus. Historical Sketch of the Deceased Founders of the Detroit Academy of Medicine. O. 291
Conservatism in Pelvic Surgery. G. V. Brown. O.. 449
Cooley, T. B. Infant Feeding in General Practice. O. 345
Cope, C. S. Does the Medical Society Pay? O.... 134
Correspondence.....36, 137, 203, 267, 307, 374, 517
Cough, Asthma, Dyspnea and Stomach. ab..... 586
Council on Pharmacy, A. M. A. Ed..... 508

COUNCILOR DISTRICT MEETINGS—

First 303
Second 32
Third 512, 550
Fifth 201
County Secretary, The. Ed.....412, 461
County Secretaries Association. Ed..... 461
Proceedings of..... 553

COUNTY SOCIETY NEWS—

Antrim 131, 551
Barry 131
Berrien 202
Calhoun 33, 465
Clinton 552
Dickinson-Iron 263
Emmett 132
Grand Traverse 202, 303, 637
Gratiot 637
Houghton.....79, 132, 202, 466, 552
Huron 79, 303, 552
Ionia 263, 637
Isabella-Clare 637
Jackson 33
Kalamazoo 264
Kent 34, 265, 467
Lenawee 34, 80
Livingston 513
Manistee 132
Marquette-Alger 81
Mason 81, 202
Mecosta 34, 552
Midland 368
Monroe 553
Montcalm 265, 553
Oakland 265
O. M., C. O., R. O.....34, 468
Osceola-Lake 81
Ottawa 429
Presque Isle 638
Saginaw 81
St. Joseph 266, 513
Sanilac 82
Shiawassee 35
Tri 35, 82
Tuscola 82
Wayne 35, 133, 266, 303
Crane, Caroline B. The Woman's Club in the Fight Against Tuberculosis. O..... 199
Cricotomy for Pappiloma. ab..... 589
Curettage, Plea for More Frequent Following Labor. C. H. Judd. O..... 176
Cyclodialysis Versus Iridodyalysis. P. J. Livingstone. O. 525

D

Davis, Clara M. Obstetrical Service for the Laboring Classes, and the relation of the Midwife to It, in Michigan. O. 213
Deaths.....38, 84, 140, 204, 269, 306, 376, 470, 514, 640
Dementia Americana. W. A. Stone. O..... 153
Detroit Academy of Medicine, Historical Sketch of the Deceased Founders of. Leartus Connor. O... 291
Diabetes, Craving for Sweets in. ab..... 209
Mellitus, Treatment. ab..... 87

PAGE

Mellitus, Treatment of. H. A. Freund. O... 63
Diet and Digestion. F. J. Groner. O..... 404
Diet in Gynecology. J. H. Kellogg. O..... 597
Diphtheria Herpes Facialis. ab..... 90
Relation of Human to That in Lower Animals. ab. 318
Disseminated Sclerosis. ab..... 642
Dock, Dr. George, Resignation of. Ed..... 460
Dock, George. Some Modern Views of Tuberculosis. O. 183
The Diagnosis of Obstruction of the Esophagus. O. 435
Dodge, W. T. Nostrums and Proprietary Preparations. O. 610
Druggist, What the Manufacturing, Does for the Doctor. M. P. Kemp. O..... 489
Drum Membrane, Artificial, Case of. Emil Amberg. O. 336
Duodenal Ulcer. ab..... 585
Dysmenorrhea. R. Peterson. O..... 9

E

Eclampsia, Renal Decapsulation in. ab..... 208
Ectopic Gestation, Case of. F. B. Tibbals. O..... 544
Elwood, C. R. Acute Mastoiditis. O..... 56
Enders, W. H. A Complete, Practical and Brief Examination of the Alimentary Tract. O..... 232
Enteroptosis, Surgical Phases of. ab..... 271
Epithelioma of Penis. ab..... 40
Ergot, Use Other Than in Obstetrics. ab..... 474
Esophagus, Diagnosis of Obstruction of. George Dock. O. 435
Exophthalmic Goitre, Surgical Treatment of. ab.... 86
Exostosis, Case of. Emil Amberg. O..... 336
Extra-Uterine Pregnancy. See Pregnancy.
Eye, The in Death. ab..... 44

F

Family-Doctor, Wanted. A Toast. F. B. Tibbals. O. 368
Felons, Treatment of. J. W. Vaughan. O..... 45
Femur, Fracture of Neck of. ab..... 212
Fibroid Tumors and Pregnancy. ab..... 39
Fibromyomata Uteri. ab..... 210
Frauds, The Exposure of. Ed..... 180
Freund, H. A. Treatment of Diabetes Mellitus. O.. 63
The Diagnosis and Treatment of Some Cardiac Arythmias. O. 501
Fulkerson, C. B. Medical Fallacies. O..... 170

G

Gall Bladder, Septic, Case of. F. B. Tibbals. O.... 544
Ganglia, Pathogenesis of. ab..... 432
Garner, H. B. Report of Case of Umbilical Hernia. O. 165
The Country Surgeon. O..... 454
Gas-Ether Anesthesia. ab. 520
Gelatine Enemata in Intestinal Hemorrhage. ab.... 270
Genito-Urinary Tract, Ear Affections in. ab..... 148
Glycogen in Leucocytes. ab..... 270
Godfrey, A. T. The Value of Urinalysis in the Recognition of Disease. O..... 445

PAGE

Goitre, Exophthalmic, Treatment of. J. C. Solis. O. 483
Griffin, W. L. Epidemic Anterior Poliomyelitis. O.. 49
Griswold, L. S. Surgical Operations on the Head. O. 113
Gynecology, Diet in. J. H. Kellogg. O..... 597

H

Hair, Nutritive and Neurotic Disturbances of the. ab. 476
Haughey, W. H. Hygiene in Pregnancy. O..... 21
Hay Fever, Treatment of. ab..... 434
Head, Surgical Operations on the. L. S. Griswold. O.. 113
Heart Block. Ed..... 359
Heart, Treatment Diseases of. ab..... 87
Heart, Treatment of Diseases of. W. L. Wilson. O. 399
Hemorrhage from Stomach and Duodenum. ab..... 378
Gelatine in Intestinal. ab..... 270
Hepatic, Arrest of. ab..... 585
Intracranial in New Born. ab..... 378
Time to Operate in Intra-abdominal. ab..... 521
Tincture of Eucalyptus in. ab..... 474
Hernia, Curative vs. Palliative Treatment of. F. B. Walker. O. 286
Hernia, Gastric Disturbances Caused by. Max Ballin. O. 91
Herniae, Reduction en Masse. ab..... 271
Hernia, Umbilical, Report of Case. H. B. Garner, O. 165
Herpes Facialis in Diphtheria. ab..... 90
Hirschman, L. J. What the Public Should Know Concerning Venereal Disease. O..... 218
Hutchinson, W. G. Rheumatism in Children. O.... 249
Hydrocele, Bottle Operation for. ab..... 42
Hygiene in Pregnancy. W. H. Haughey. O..... 21
Hypophysis, The Surgery of. ab..... 641
Hysteria, Neurasthenia, Hypochondria and Simulation, The Distinction Between. C. D. Camp. O.. 531

I

Iliac Veins, Adhesions of. ab..... 320
Indiana State Society, Journal of. Ed..... 76
Indican Reaction. ab..... 272
Indigent Sick, Compensation for the Care of. Ed... 123
Infant Feeding in General Practice. T. B. Cooley. O. 345
Infant Feeding, Some Advances in. ab..... 475
Influenza. ab. 519
Intestinal Fermentation and Test Meals. ab..... 431
Intestinal Obstruction. ab..... 378
Intracranial Hemorrhage in New Born. ab..... 378
Ionized State, Matter in the. F. T. F. Stephenson. O. 1
Iritis, Gonorrheal. ab..... 523
Irrigation of Chest, Lowering of Blood Pressure from. ab. 586

J

Johnson, Dr. George K. Obit..... 515
Johnston, Collins H. The Infective Possibilities of Cow's Milk. O..... 591
Joints, Diseases of. H. E. Randall. O..... 106
Joy, H. M. Carcinoma of the Pancreas. O..... 149
Judd, C. H. A Plea for More Frequent Curettage Following Labor. O..... 176

PAGE

K

Kellogg, J. H. Diet in Gynecology. O..... 597
Kemp, M. P. Perplexing Points in Serum Therapy. O. 618
What the Manufacturing Druggist Does for the Doctor. O. 489
Kidney, Calculus and Tuberculosis. ab..... 381
Disease, Nose, Throat, Larynx and Ear Disturbance in. ab..... 589
Hematogenous Infection of. ab..... 644
Movable. E. B. Smith. O..... 167
Suppuration of Pelvis. ab..... 644
Kiefer, G. L. Tuberculosis in Detroit. O..... 195
Killian's Radical Operation. ab..... 273

L

Lawbaugh, A. I. A New Apparatus for the Treatment of Fracture of the Patella. O..... 332
Laws, Uniformity of Medical. Ed..... 627
Leland, F. B. The Michigan State Sanatorium for Tuberculosis. O. 197
Lenawee County. Ed..... 76
Leucocyte Count in Appendicitis. ab..... 142
In Abdominal Neoplasms. W. A. Repp. O.. 494
Leuschner, Richard. Brief Summary Regarding the Bath Treatment at Mt. Clemens in Reference to Nervous Patients. O. 295
Livingstone, P. J. Cyclodialysis vs. Iridodyalysis. O. 525
Luce, H. A. See Rich, H. M.

M

McColl, Dr. Hugh. Obit.....269, 307
Maguire, F. J. W. A New Dietetic and Injection Method of Treating Typhoid Fever. O..... 339
Malingering, New Sign of. ab.....522, 642
Manistee Meeting. Ed..... 76
Manton, W. P. A Case of Obstetrics with Sequelae. O. 396
Menorrhagia and Metrorrhagia. O..... 15
Marriages..38, 84, 140, 204, 269, 306, 376, 470, 514, 583, 640
Massage, Occupation for the Blind. ab..... 44
Mastoiditis, Acute. C. R. Elwood. O..... 56
Measles, Serum Reaction in. ab..... 318
Medical Education. Ed..... 458
Medical Fallacies. C. B. Fulkerson. O..... 170
Medical Society, Does It Pay? C. S. Cope. O..... 134
Medicine, Neglected Fields in. W. S. Anderson. O. 604
Melena Neonatorum, Calcium Chloride in. ab..... 377
Meningitis. ab. 590
A Case of Otitic. R. B. Canfield. O..... 53
Serum Treatment of. ab..... 584
Menorrhagia and Metrorrhagia. W. P. Manton. O. 15
Metcalf, W. F. Acute Peritonitis. O..... 440
Metchnikoff's Theory of Old Age. Ed..... 297
Michigan State Medical Society. Annual Meeting, Notice of. Ed.....256, 300, 361
Program of 310
Official Minutes 414
Council, January Meeting..... 78
Midwife. Clara M. Davis. O..... 213

PAGE

Milk, The Infective Possibilities of Cow's. Collins H. Johnston. O..... 591
Mt. Clemens, Bath Treatment at, of Nervous Patients. Richard Leuschner. O..... 295
Mutism, Psychical. ab..... 41
Myasthenia, Pseudo of Toxic Origin. ab..... 145

N

Negro, Skin Diseases in. ab..... 274
Nelson, J. O. Etiology and Prophylaxis of Tuberculosis. O. 71
Nephritis, Chronic Interstitial and Its Relation to Recurring Paralysis. B. A. Shepard. O..... 244
A Chronic. ab..... 432
Nephrolithiasis. ab. 143, 381
Nervus Abducens, Paralysis in Otitis. ab..... 148
New Era in Medicine. Ed..... 410
News..37, 83, 139, 203, 268, 305, 375, 430, 468, 513, 583, 638
Nitroglycerine in the Treatment of Neuritis. ab.... 319
Nobel Prize. Ed..... 76
Nomenclature, Scientific Medical. Ed..... 26
Nostrums, How Some are Exploited. Ed..... 27
Nostrums and Proprietary Preparations. W. T. Dodge. O. 610

O

Obstetrics, A Case of with Sequelae. W. P. Manton. O. 396
Asepsis in. E. T. Abrams. O..... 498
Obstetrical Service for the Laboring Classes and the Relation of the Midwife to It. Clara M. Davis. O. 213
Ochsner, E. H. The Treatment of Joint Tuberculosis. O. 389
Ocular Faults in Children. ab..... 89
Ophthalmia Neonatorum. ab..... 146
Ophthalmo Reaction of Tuberculosis. Ed..... 125
Opsonic Method in Skin Diseases. ab.....43, 90
Opsonic Theory and Technic. Joseph Sill. O..... 275
Osteomyelitis, Regeneration of Bone in. ab..... 212
Ostrander, Herman, President, 1907-1908.
Ostrander, Herman. Some Problems of Preventative Medicine. O. 383
Otitis Media. ab..... 590
In Infants. ab..... 323
Surgical Treatment of Acute. V. A. Chapman. O. 477
Oto-Anthritis in an Infant. Emil Amberg. O..... 336
Ozena, Nasal Tamponade in. ab..... 434

P

Palmerlee, G. H. Technic of Suprapubic Prostatectomy. O. 622
Pancreas, Carcinoma of. H. M. Joy. O..... 149
Parathyroid Bodies. ab..... 144
Glands. ab. 271
Parmenter, Dr. Wm. Resolutions on Death of..... 140
Parmeter, Rolland. Conservative Treatment of Pelvic Inflammatory Conditions. O..... 110
Patella, A New Apparatus for Treatment of Fracture of. A. I. Lawbaugh. O..... 332
Patent Medicines Advertised in Detroit Papers. Ed. 253

PAGE

Pelvic Inflammatory Conditions, Conservative Treatment of. Rolland Parmenter. O..... 110
Perkins, Jabez. Obit..... 30
Peritonitis, Acute. W. F. Metcalf. O..... 440
Diffuse in Women. ab..... 587
Peterson, R. Dysmenorrhea. O..... 9
Phenophthalein. ab. 474
Phlebitis of the Left Leg. ab..... 432
Placenta, Relation of Weight of to That of Child. ab. 472
Pneumonia, Preventive Medicine in Its Relation to. F. W. Shumway. O..... 101
Cardiac Failure in. ab..... 209
Pneumocele of the Frontal Sinus. ab..... 273
Pneumococcus, in Ocular Infections. ab..... 322
Poliomyelitis, Additional Case of. C. F. Smith. O. 52
Epidemiology of Acute. ab..... 433
Epidemic Anterior. W. L. Griffin. O..... 49
Pregnancy, Extra-Uterine, Diagnosis of. C. N. Smith. O. 325
Extra-Uterine, Time to Operate. ab..... 521
Hygiene in. W. H. Haughey. O..... 21
Primary Ovarian. ab..... 320
Pernicious Vomiting of. ab..... 319
Prescription, Who Owns the. Ed..... 181
Preventative Medicine, Some Problems in. Herman Ostrander. O. 383
Progress in Medicine and Surgery. H. E. Randall. O. 540
Prostate Gland, The. E. C. Taylor. O..... 178
Prostatectomy, Technic of Suprapubic. G. H. Palmerlee. O. 622
Psychic Treatment of Nervous Disorders. C. A. Stimson. O. 281
Psychotherapy. Ed. 299
In Functional Nervous Diseases. ab..... 145
Puerperal Septicemia, Case of. F. B. Tibbals. O.... 544

R

Randall, H. E. Diseases of Joints. O..... 106
Some Recent Progress in Medicine and and Surgery. O..... 540
Recreation for Physicians. Ed..... 510
Repp, W. A. Differential Leucocyte Count in Abdominal Neoplasms. O. 494
Rheumatism in Children. W. G. Hutchinson, O..... 249
Rich, H. M., and Luce, H. A. Report of a Case of Sudden Death in an Infant Having an Enlarged Thymus Gland with Three Lobes. O..... 334
Rosenmueller's Fossal. ab..... 273

S

St. Mary's and Gordon Hospitals, London..... 36
Sarcoma, Conservative Treatment of. ab..... 142
Metastatic with Involvement of the Osseous System. R. E. Wells. O..... 487
Scarlet Fever, Serum Reaction in. ab..... 318
Use of Serum in. ab..... 377
Sera, Rectal Administration of Antitoxic. ab..... 318
Serum, Theory of Therapeutic Injections of. C. M. Stafford. O. 329
Serum Therapy, Perplexing Points in. M. F. Kemp. O. 618
Shepard, B. A. Chronic Interstitial Nephritis and Its Relation to Recurring Paralysis. O..... 244

PAGE

Shoulder, Round or Stoop. ab..... 524
Shumway, F. W. Preventive Medicine in Its Relation to Pneumonia. O..... 101
Tuberculosis in Michigan. O..... 192
Sill, Joseph. Opsonic Theory and Technic. O..... 275
Skiagraphy in Orthopedic Surgery. ab..... 86
Small Pox in Michigan. ab..... 285
Small, Sidney I. Obit..... 28
Smith, C. F. Poliomyelitis. O..... 52
Smith, C. N. The Diagnosis of Extrauterine Pregnancy. O. 323
Smith, E. B. Dr. Hal C. Wyman. Obit..... 372
Movable Kidney. O..... 167
Smith, R. R. Amenorrhea. O..... 17
Snake Poisoning in the United States. ab..... 471
Solis, J. C. The Treatment of Exophthalmic Goitre. O. 483
Somnolence, Morbid. ab..... 522
Sondermann's Suction Apparatus. ab..... 434
Spinal Cord, Subacute Degeneration of. ab..... 382
Spirochetes, Comparative Studies of. ab..... 210
Splenomegaly. ab. 210
Stafford, C. M. Serum Diagnosis in Typhoid. O... 160
Theory of Therapeutic Injections of Fresh Normal Serum in Acute Infections. O..... 329
State Board of Health, Meeting of..... 260
Stephenson, F. T. F. Matter in the Ionized State. O. 1
Stimson, C. A. Psychic Treatment of Nervous Disorders. O. 281
Stomach and Duodenum, Hemorrhage from. ab..... 378
Stone, W. A. Dementia Americana. O..... 153
Suggestion, What It Can Do for Children. ab..... 588
Surgeon, the Country. H. B. Garner. O..... 454
Sycosis, X-ray in. ab..... 324
Syphilis, Case of. F. B. Tibbals. O..... 544
Inherited. ab. 211
Mercuric Bromide in. ab..... 474
Of the Nervous System. ab..... 382

T

Tabes and Lues. ab..... 584
Tabes Dorsalis. ab..... 642
Tabes, Suggesting Acromegaly. ab..... 522
Talipes Calcaneo-Valgus. ab..... 212
Taylor, E. C. The Prostate Gland. O..... 178
Telephone, Situation in Detroit. Ed..... 74
Thymus Gland, Sudden Death of an Infant Having. H. M. Rich and H. A. Luce. O..... 334
Tibbals, F. B. Report of Cases. O..... 544
"Wanted—A Family Doctor." A Toast. O... 368
Tongues, Blach Hairy. ab..... 434
Tonsillar Abscess. ab..... 589
Hyperplasia. ab. 589
Tonsillitis, Blindness in. ab..... 146
Trichomonas Hominis Intestinalis. ab..... 207
Trypsin in Cancer. Ed..... 124
Tubercle Residue of V. C. Vaughan, in Surgical Tuberculosis. J. W. Vaughan, Jr. O..... 534
Tuberculin, Ophthalmo Reaction. ab..... 320
Tuberculin Tests, The New. ab..... 141
Tuberculosis Association, Organization of an Anti-. A. S. Warthin. O..... 116
Campaign Against in U. S. Ed..... 627
Channels of Communication in. ab..... 321

PAGE

Channels of Infection, Specific Therapy. ab.. 85
Detroit Society for Study and Prevention of. Ed. 359
Directory of Societies, Hospitals, etc., in Michigan 628
Etiology and Prophylaxis. J. O. Nelson. O.. 71
Of Genito-Urinary Organs. ab..... 147
International Congress on..... 468
In Detroit. G. L. Kiefer. O..... 195
In Michigan. F. W. Shumway. O..... 192
Joint, Treatment of. E. H. Ochsner. O..... 389
Ophthalmo Reaction in. Ed..... 125
Pathology of in Children. ab..... 321
Posture in Treatment of. ab..... 377
Potassium Iodide in. ab..... 434
Recompense for Cows Slaughtered. Ed..... 509
Some Modern Views of. George Dock. O.... 183
The Anti- Crusade. V. C. Vaughan. O..... 186
The Michigan State Sanatorium. F. B. Leland. O. 197
The Transmission of. ab..... 587
The War on..... 260
The Woman's Club in Fight Against. Caroline B. Crane. O..... 199
Work of the State Society. Ed..... 630
Tuscola Plan of County Medical Work. Ed..... 123
Typhoid Bacillus, Intracranial Abscess from. ab..... 88
Eberth Bacilli in Those Not Sick With. ab... 377
Typhoid Fever, A New Dietetic and Injection Treatment Method. F. J. W. Maguire. O..... 339
Blood Cultures in Diagnosis of. ab..... 207
Blood Cultures in. ab..... 380
Ophthalmo-diagnostic test in. ab..... 144
Results of Modern Research in. ab..... 144
Season. Ed. 457
Serum Diagnosis in. C. M. Stafford. O..... 160
Fever, Specific Treatment of. ab..... 85

U

Uremia, Treatment of. ab..... 209
Urethra, Primary Carcinoma of Female. ab..... 379
Urinary Casts. Origin of. ab..... 380
Urinalysis, Value of. A. T. Godfrey. O..... 445
Uterus, Bacteriology of the Puerperal. ab..... 473
Uterus, Fibromyomata of. ab..... 210

V

Vaughan, J. W. Preliminary Report Upon the Use of the Tubercle Residue of V. C. Vaughan in Surgical Tuberculosis. O..... 534
The Treatment of Felons. O..... 45
Vaughan, V. C. The Anti-Tuberculosis Crusade. O.. 186
Venereal Disease, What the Public Should Know. L. J. Hirschman. O. 218
Verrucal Plantares. ab..... 274
Vomiting, Periodic. ab..... 431

W

Walker, F. B. Curative vs. Palliative Treatment of Hernia. O. 286
Warthin, A. S. Organization of an Anti-Tuberculosis Association. O. 116
Webber, Dr. N. W. Obit. J. H. Carstens..... 371
Wells, R. E. A Case of Metastatic Sarcoma with Special Involvement of the Osseus System. O.... 487
Wilson, W. L. The Treatment of Chronic Diseases of the Heart with Carbonated Mineral Baths and Exercises. O. 399
Wyman, Dr. Hal C. Obit.....205, 372
Wyman, Hal C. Some Remarks on Biliary Surgery. O. 342

X

X-Ray, Smaller Doses of in Radio-Therapy. ab..... 324
X-Ray in Sycosis. ab..... 324

Y

Yates, W. H. Abdominal Pain: Its Diagnostic Significance. O. 237

THE JOURNAL

OF THE

Michigan State Medical Society

Annual Subscription $2.00 | Published Monthly under Direction of the Council | Single Copy, 20c

VOLUME VII | DETROIT, MICHIGAN, DECEMBER, 1908 | NUMBER 12

CONTENTS

ORIGINAL.

The Infective Possibilities of Cow's Milk. Collins H. Johnston, M. D., Grand Rapids. 591

Diet in Gynecology. J. H. Kellogg, M. D., Battle Creek 597

Neglected Fields in Medicine. Willis S. Anderson, M. D., Detroit..... 604

Nostrums and Proprietary Preparations. W. T. Dodge, M. D., Big Rapids..... 610

Perplexing Points in Serum Therapy. Minta Proctor Kemp, M. D., Detroit..... 618

The Technic of Suprapubic Prostatectomy. G. H. Palmerlee, M. D., Detroit..... 622

EDITORIAL.

Uniformity of Medical Laws..... 627

The Campaign Against Tuberculosis in the United States 628

The Work of the State Tuberculosis Association 630

The Anatomik Footwear Company..... 630

If Physicians Advertised..... 631

BOOK NOTICES.

Osler-McCrea—Modern Medicine. Vol. IV..... 632

Lexer-Bevan—General Surgery 632

Continued on next page.

Annual Meeting at Kalamazoo, September, 1909. | Entered at Detroit as Second-class Matter

CONTENTS—Continued from First Page

Bandler—Medical Gynecology 633
Bonney—Pulmonary Tuberculosis 634
Gray—Anatomy, Descriptive and Surgical..... 634
Clark and Diefendorf—Neurological and Mental Diagnosis 635
Ballenger—Diseases of Nose, Throat and Ear..... 635
Cooke—Obstetrical Technique 635
Ohmann-Dumesnil—Diseases of the Skin..... 636
Colorado Souvenir Book..... 636
De Lee—Obstetrics for Nurses..... 636
Munro—Suggestive Therapeutics 636
Longcope—International Clinics 636
Physicians' Visiting List..... 637
Practitioners' Visiting List..... 637

COUNTY SOCIETY NEWS.

Grand Traverse 637
Gratiot 637
Ionia 637
Isabella-Clare 637
Presque Isle 638
News, Marriages, Deaths..... 638

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY. The Surgery of the Hypophysis..... 641

NEUROLOGY. A New Sign for the Detection of Malingering. The Pathogenesis of Tabes Dorsalis, The Course and Progress of Disseminated Sclerosis 642

PEDIATRICS. Interpretation of Blood Examination.... 643

GENITO-URINARY SURGERY. Analysis of the Symptoms in Forty Cases of Suppuration of the Pelvis of the Kidney. Acute Hematogenous Infection of One Kidney in Persons Apparently Well..... 644

Meetings of County Medical Societies. XVI
List of County Medical Societies, with Officers.....XIV
List of Officers of State Society.....IV

B. R. SCHENCK, M. D., Detroit.....Editor C. S. OAKMAN, M. D., Detroit, Associate Editor

OFFICERS OF THE SOCIETY

President, A. I. LAWBAUGH.....Calumet
First Vice-Pres., J. W. BOSMAN.....Kalamazoo
Second Vice-Pres., J. A. CHRISTENSON...Manistee
Third Vice-Pres., SARAH CHASE....Traverse City
Fourth Vice-Pres., J. D. BRUCE.....Saginaw
State Secretary, B. R. SCHENCK.....Detroit
Treasurer, GEO. W. MORAN.....Detroit

OFFICERS OF SECTIONS

General Medicine

W. M. DONALD, Chairman.....Detroit
G. F. INCH, Secretary.....Kalamazoo

Surgery, Ophthalmology and Otology

L. J. HIRSCHMAN, Chairman.....Detroit
J. E. GLEASON, Secretary.....Detroit

Obstetrics and Gynecology

F. C. WARNSHUIS.....Grand Rapids
C. G. PARNALL, Secretary.....Jackson

Delegates to the American Medical Association

A. M. HUME, term expires 1909.....Owosso
T. A. FELCH, term expires 1909.....Ishpeming
F. W. ROBBINS, term expires 1910.....Detroit
S. C. GRAVES, term expires 1910.....Grand Rapids

Alternate Delegates.

A. W. CRANE, term expires 1910.....Kalamazoo
H. E. RANDALL, term expires 1910.....Lapeer

Board of Councilors and Councilor Districts

	Term Expires	
First—L. J. HIRSCHMAN	1909	Detroit
Second—A. E. BULSON	1913	Jackson
Third—W. H. HAUGHEY, Secretary	1909	Battle-Creek
Fourth—A. H. ROCKWELL	1911	Kalamazoo
Fifth—R. H. SPENCER	1911	Grand Rapids
Sixth—C. B. BURR, Chairman	1909	Flint
Seventh—M. WILLSON	1911	Port Huron
Eighth—A. L. SEELEY	1913	Mayville
Ninth—B. H. MCMULLEN	1913	Cadillac
Tenth—C. H. BAKER	1911	Bay City
Eleventh—W. T. DODGE	1909	Big Rapids
Twelfth—C. J. ENNIS	1913	St. Ste. Marie

FIRST DISTRICT—Lenawee, Macomb, Monroe, Oakland, Washtenaw, Wayne.

SECOND DISTRICT—Hillsdale, Ingham, Jackson.

THIRD DISTRICT—Branch, Calhoun, Eaton, St. Joseph.

FOURTH DISTRICT—Allegan, Berrien, Cass, Kalamazoo, Van Buren.

FIFTH DISTRICT—Barry, Ionia, Kent, Ottawa.

SIXTH DISTRICT—Clinton, Genesee, Livingston, Shiawassee.

SEVENTH DISTRICT—Huron, Lapeer, Sanilac, St. Clair.

EIGHTH DISTRICT—Gratiot, Isabella, Midland, Saginaw, Tuscola, Clare and (Gladwin unattached).

NINTH DISTRICT—Benzie, Charlevoix, (including Antrim), Grand Traverse, (including Leelanaw), Kalkaska, Manistee, Mason, Missaukee, Wexford.

See Adv. page XI.

In order that all Communications, Papers, Abstracts and Advertisements may be printed in the current monthly issue, they must reach the office of the Editor not later than the 15th of the month preceding publication.

Fairchild Brothers & Foster

Specialists in the Applied Chemistry

of the Digestive Ferments

offer preparations of the gastric and pancreatic juices which are true to name, containing the particular digestive enzymes as described and of the particular degree of activity, stated under well known conditions of assay. These products have invariably been found to possess the properties, and perform the particular service stated as actual digestive agents for the peptonisation of foods—farinaceous, cereal, milk, beef, etc. Thus, every time they have been used they have been actually "tested."

It is an axiom that "we know digestive enzymes only by their action." In pharmacy and in medicine we deal only with active enzymes capable of demonstrable action; and the test for the presence and activity of an enzyme is as conclusive and as demonstrable as the test or reaction for quinine, or arsenic.

FAIRCHILD BROTHERS & FOSTER have persistently and consistently sought to advance the application of the digestive enzymes in every useful direction, and to develop their possibilities in medicine. They have, therefore, never made inert, feeble and incompatible preparations. Whenever and wherever dispensed a product of the digestive ferments bearing the name FAIRCHILD will be found reliable in the most unequivocal sense of the word.

DR. BROUGHTON'S SANITARIUM

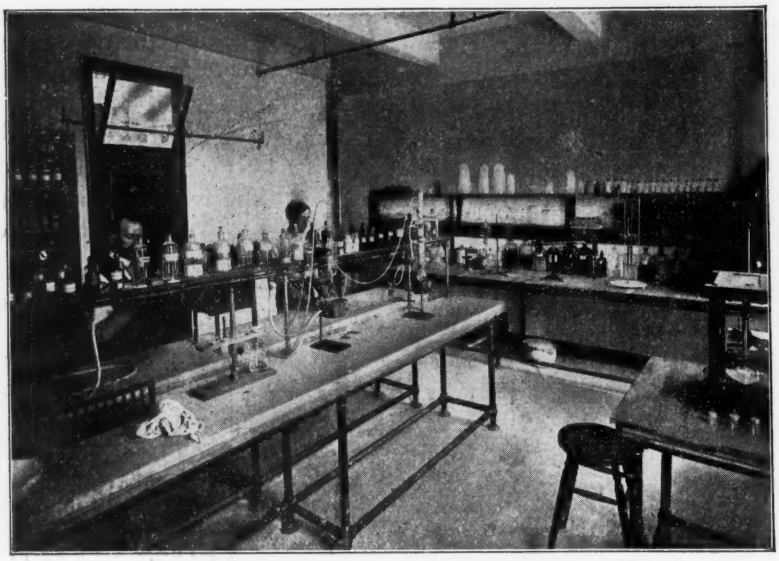
For Opium and other drug addictions, including alcohol and special nervous cases. Methods easy, regular, humane. 60 to 65 per cent. of permanent cures. Good heat, light, water, help, board, etc. A well-kept home.

Address, R. BROUGHTON, M.D.,

2007 S. Main St., Rockford, Ill.

THE PASSING OF "THERAPEUTIC NIHILISM"

The intelligent use of drugs that are right (dependable, result-bringing), again in the ascendency



A Corner in Our Chemical Research and Experimental Laboratory, Where Qualities are Determined: Physiological Department not Shown.

"GIVE MEDICINE WISELY"

THE Kentucky Med. Journal (August, 1908,) in an editorial entitled "Give Medicine Wisely," says: "It is wonderful how much can be accomplished for the relief of pain and disease by drugs—: * * * Drugs must be properly administered. The nauseating messes once popular should be discarded because their administration is unnecessary. Potent preparations should be used. * * * Let those who do not know the use and effect and dosage of the potent drugs get busy and learn them, and we will hear less about therapeutic nihilism and similar nonsense.

No greater tribute could be paid to active-principle medication than this. There are no therapeutic nihilists among the users of the positive, potent alkaloids and active-principle remedies as prepared and put up by THE ABBOTT ALKALOIDAL CO.

You will be interested in our new 300-page "Digest of Positive Therapeutics," a copy of which will be sent FREE to any physician on request. This Digest also contains treatment suggestions, dosage guides, therapeutic price list, etc.

Liberal Samples will also be sent, to any interested doctor, FREE ON REQUEST.

The Abbott Alkaloidal Company

CHICAGO, ILL.

251 Fifth Ave., New York. 225 Central Bldg., Seattle, Wash. 1361 Franklin St., Oakland, Cal.

☞ **NOTE—When in Chicago be sure to come and see us. If ever at any of our branch points, drop in a moment. We've no secrets from the medical profession. There's no dope for quackery made here. We do not serve the laity. The pleasure of the profession is ours to do.**

Continued from adv. page iv.

TENTH DISTRICT—Alpena (including Alcona), Bay (including Arenac and Iosco), Cheboygan, Emmet, O., M., C., O., R., O., (Otsego, Montgomery, Crawford, Oscoda, Roscommon and Ogemaw combined), and Presque Isle.

ELEVENTH DISTRICT—Mecosta, Montcalm, Muskegon (including Oceana), Newaygo, Osceola (including Lake).

TWELFTH DISTRICT—Chippewa (including Luce and Mackinac), Delta, Dickinson-Iron, Gogebic, Houghton (including Baraga, Keweenaw and Ontonagon), Marquette (including Alger), Menominee, Schoolcraft.

Michigan Member of the National Legislative Council of the American Medical Association

W. H. SAWYER.....Hillsdale

PERMANENT COMMITTEES

On Scientific Work

A. I. LAWBAUGH, Chairman.....Calumet
B. R. SCHENCK, State Secretary.....Detroit
W. M. DONALD.....Detroit
L. J. HIRSCHMAN.....Detroit
F. C. WARNSHUIS.....Grand Rapids
G. F. INCH.....Kalamazoo
J. E. GLEASON.....Detroit
C. G. PARNALL.....Jackson

On Arrangements

A. H. ROCKWELL, Chairman.....Kalamazoo
J. W. BOSMAN.....Kalamazoo
F. T. BUTLER.....Alamo
H. O. STATLER.....Kalamazoo
JOHN JACKSON.....Kalamazoo
F. SHILLITO.....Kalamazoo

On Medical Education

DAVID INGLIS, until 1910.....Detroit
C. C. HUBER, until 1909.....Ann Arbor
FLEMMING CARROW, until 1911.....Detroit

On Legislation and Public Policy

W. H. SAWYER, Chairman.....Hillsdale
JAMES W. INCHES.....Saint Clair
E. T. ABRAMS.....Dollar Bay

SPECIAL COMMITTEES

On Venereal Prophylaxis

A. P. BIDDLE, Chairman.....Detroit
A. S. WARTHIN.....Ann Arbor
W. E. BLODGETT.....Detroit

To Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State

WALTER R. PARKER, Chairman.....Detroit
C. H. BAKER.....Bay City

On Tuberculosis

H. J. HARTZ, Chairman.....Detroit
A. S. WARTHIN.....Ann Arbor
A. W. CRANE.....Kalamazoo
E. L. SHURLY.....Detroit
P. M. HICKEY.....Detroit
C. H. JOHNSTON.....Grand Rapids
F. D. HARKIN.....Marquette

On Medical Defense.

F. B. TIBBALS, Chairman.....Detroit
A. M. HUME.....Owosso
A. H. ROCKWELL.....Kalamazoo
W. J. DUBOIS.....Grand Rapids
A. W. HORNBOGEN.....Marquette

BUFFALO LITHIA SPRINGS WATER

In ALBUMINURIA OF BRIGHT'S DISEASE PREGNANCY AND SCARLET FEVER

DR. JOS. HOLT, of New Orleans, Ex-President of the State Board of Health of Louisiana, says: "I have prescribed BUFFALO LITHIA WATER in affections of the kidneys and urinary passages, particularly in Gouty subjects, in Albuminuria, and in irritable conditions of the Bladder and Urethra in females. The results satisfy me of its extraordinary value in a large class of cases most difficult to treat."

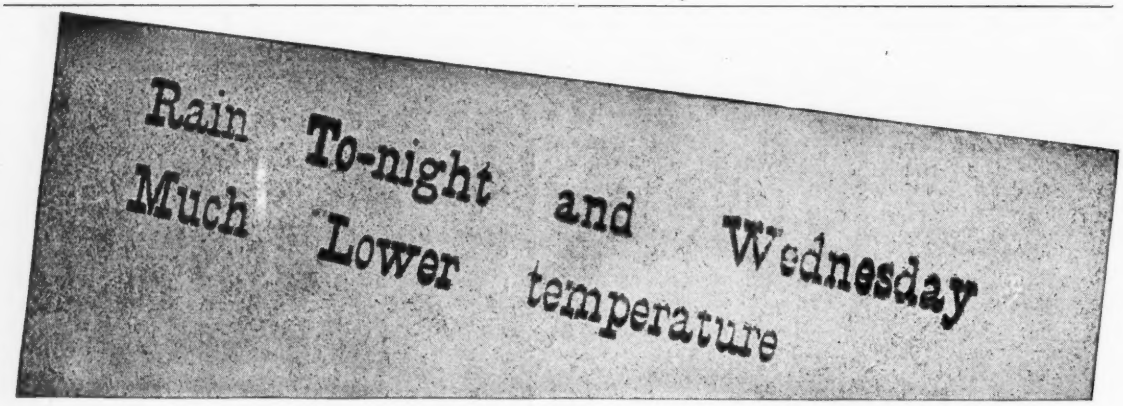
DR. GEORGE BEN JOHNSTON, Richmond, Va., ex-President Southern Surgical and Gynecological Association, ex-President Medical Society of Virginia, and Professor of Gynecology and Abdominal Surgery, Medical College of Virginia: "It is an agent of great value in the treatment of the Albuminuria of Pregnancy."

T. GRISWOLD COMSTOCK, A. M., M. D., St. Louis, Mo., says: "I have made use of BUFFALO LITHIA WATER in gynecological practice, in women suffering from acute Uræmic conditions, with results, to say the least, very favorable."

DR. J. T. DAVIDSON, New Orleans, La., ex-President New Orleans Surgical and Medical Association, says: "I have for several years prescribed BUFFALO LITHIA WATER in all cases of Scarlet Fever, directing it to be drunk *ad libitum*, with the effect of relieving all traces of Albumin, in the urine, and have found it equally efficacious in renal diseases requiring the use of alkaline water."

Medical Testimony on Request. *For Sale by Druggists Generally.*

Buffalo Lithia Springs Water Co., Buffalo Lithia Springs, Virginia.

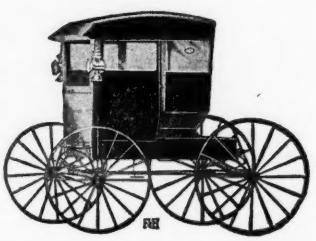


A Weather Report such as this has no terrors for the doctor who owns a Sheltertop cab. It makes no difference to him whether it rains or snows, freezes or thaws. If the weather is pleasant, he enjoys every minute of it; if it is bad, he is absolutely protected from the storm.

THE SHELTERTOP CAB

is a closed-yet-open, storm-proof vehicle. It can be used open or closed as desired, or changed from open to closed, or closed to open, in less than half a minute, without stopping the horse, dropping the lines, or leaving the seat.

This cab is made in various styles, for city and country use, at prices ranging from $75 to $200. Any doctor who intends to purchase a vehicle, either now or in the near future, should write for our book PHYSICIANS' CABS Free on request.



Fouts & Hunter Carriage Manufacturing Co.
119 South Third Street Terre Haute, Indiana

The Latest **"STIC TITE"** And the Best

EASY-FITTING, SELF-ADJUSTING EYE-GLASSES.

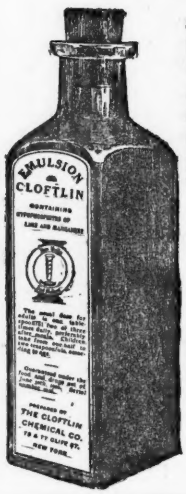
Guards opened by slightest pressure of thumb and finger, flat spring, uniform tension. We guarantee against breakage. No screws in guards or finger pieces. Large bearing surface on guards.

Write for Samples and Prices.

Johnston Optical Co., Detroit, Mich.

A DASH OF FLAVOR—fifty per cent purest Norwegian Cod-liver Oil, ten per cent C. P. Glycerin, six grains Calcium and three grains Manganese Hypophosphites to each fluid ounce—plus—skillful laboratory effort—and you have

EMULSION CLOFTLIN



a surprise to all who use it. True, it is Cod-liver Oil—but perfectly emulsified—uniquely flavored—sweet as a nut—and so palatable—that your patients will take it to the last drop.

℞ **Emulsum Olei Morrhuae**
(CLOFTLIN)

See—"New and Non-Official Remedies"—Page 44, 3rd Edition.

for all conditions where Cod-liver Oil is indicated.

Samples and Literature Free.

THE CLOFTLIN CHEMICAL CO.
75-77 Cliff St., N. Y.

"SO SIMPLE A CHILD CAN USE IT"

WHAT?

THE LITTLE WIZARD BATTERY

For local applications of electricity in Rheumatic, Neuralgic, Lumbago, Gout, Paralysis, etc., it is par excellence. Note the size of the electrodes and the consequent deep penetration. No cords, wires, or switches. The one button controls it. The simplest, most compact and complete portable Battery made.

Write for booklet, discounts, etc.

Genesee Electric Mfg. Co.
Flint, Michigan

President, A. I. LAWBAUGH.....Calumet
First Vice-Pres., J. W. BOSMAN.....Kalamazoo
Second Vice-Pres., J. A. CHRISTENSON...Manistee
Third Vice-Pres., SARAH CHASE....Traverse City
Fourth Vice-Pres., J. D. BRUCE.....Saginaw
State Secretary, B. R. SCHENCK.....Detroit
Treasurer, GEO. W. MORAN.....Detroit

Board of Councilors and Councilor Districts

	Term Expires	
First—L. J. HIRSCHMAN	1909	Detroit
Second—A. E. BULSON	1913	Jackson
Third—W. H. HAUGHEY, Secretary	1909	Battle-Creek
Fourth—A. H. ROCKWELL	1911	Kalamazoo
Fifth—R. H. SPENCER	1911	Grand Rapids
Sixth—C. B. BURR, Chairman	1909	Flint
Seventh—M. WILLSON	1911	Port Huron
Eighth—A. L. SEELEY	1913	Mayville
Ninth—B. H. MCMULLEN	1913	Cadillac
Tenth—C. H. BAKER	1911	Bay City
Eleventh—W. T. DODGE	1909	Big Rapids
Twelfth—C. J. ENNIS	1913	St. Ste. Marie

FIRST DISTRICT—Lenawee, Macomb, Monroe, Oakland, Washtenaw, Wayne.

SECOND DISTRICT—Hillsdale, Ingham, Jackson.

THIRD DISTRICT—Branch, Calhoun, Eaton, St. Joseph.

FOURTH DISTRICT—Allegan, Berrien, Cass, Kalamazoo, Van Buren.

FIFTH DISTRICT—Barry, Ionia, Kent, Ottawa.

SIXTH DISTRICT—Clinton, Genesee, Livingston, Shiawassee.

SEVENTH DISTRICT—Huron, Lapeer, Sanilac, St. Clair.

EIGHTH DISTRICT—Gratiot, Isabella, Midland, Saginaw, Tuscola, Clare and (Gladwin unattached).

NINTH DISTRICT—Benzie, Charlevoix, (including Antrim), Grand Traverse, (including Leelanaw), Kalkaska, Manistee, Mason, Missaukee, Wexford.

TENTH DISTRICT—Alpena (including Alcona), Bay (including Arenac and Iosco), Cheboygan, Emmet, O., M., C., O., R., O., (Otsego, Montgomery, Crawford, Oscoda, Roscommon and Ogemaw combined), and Presque Isle.

ELEVENTH DISTRICT—Mecosta, Montcalm, Muskegon (including Oceana), Newaygo, Osceola (including Lake).

TWELFTH DISTRICT—Chippewa (including Luce and Mackinac), Delta, Dickinson-Iron, Gogebic, Houghton (including Baraga, Keweenaw and Ontonagon), Marquette (including Alger), Menominee, Schoolcraft.

OFFICERS OF SECTIONS

General Medicine

W. M. DONALD, Chairman.....Detroit
G. F. INCH, Secretary.....Kalamazoo

Surgery, Ophthalmology and Otology

L. J. HIRSCHMAN, Chairman.....Detroit
J. E. GLEASON, Secretary.....Detroit

Obstetrics and Gynecology

F. C. WARNSHUIS.....Grand Rapids
C. G. PARNALL, Secretary.....Jackson

Delegates to the American Medical Association

A. M. HUME, term expires 1909.....Owosso
T. A. FELCH, term expires 1909.....Ishpeming
F. W. ROBBINS, term expires 1910.....Detroit
S. C. GRAVES, term expires 1910.....Grand Rapids

Alternate Delegates.

A. W. CRANE, term expires 1910.....Kalamazoo
H. E. RANDALL, term expires 1910.....Lapeer

Michigan Member of the National Legislative Council of the American Medical Association

W. H. SAWYER.....Hillsdale

PERMANENT COMMITTEES

On Scientific Work

A. I. LAWBAUGH, Chairman.....Calumet
B. R. SCHENCK, State Secretary.....Detroit
W. M. DONALD.....Detroit
L. J. HIRSCHMAN.....Detroit
F. C. WARNSHUIS.....Grand Rapids
G. F. INCH.....Kalamazoo
J. E. GLEASON.....Detroit
C. G. PARNALL.....Jackson

On Arrangements

A. H. ROCKWELL, Chairman.....Kalamazoo
J. W. BOSMAN.....Kalamazoo
F. T. BUTLER.....Alamo
H. O. STATLER.....Kalamazoo
JOHN JACKSON.....Kalamazoo
F. SHILLITO.....Kalamazoo

On Medical Education

DAVID INGLIS, until 1910.....Detroit
C. C. HUBER, until 1909.....Ann Arbor
FLEMMING CARROW, until 1911.....Detroit

On Legislation and Public Policy

W. H. SAWYER, Chairman.....Hillsdale
JAMES W. INCHES.....Saint Clair
E. T. ABRAMS.....Dollar Bay

SPECIAL COMMITTEES

On Venereal Prophylaxis

A. P. BIDDLE, Chairman.....Detroit
A. S. WARTHIN.....Ann Arbor
W. E. BLODGETT.....Detroit

To Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State

WALTER R. PARKER, Chairman.....Detroit
C. H. BAKER.....Bay City

On Tuberculosis

H. J. HARTZ, Chairman.....Detroit
A. S. WARTHIN.....Ann Arbor
A. W. CRANE.....Kalamazoo
E. L. SHURLY.....Detroit
P. M. HICKEY.....Detroit
C. H. JOHNSTON.....Grand Rapids
F. D. HARKIN.....Marquette

On Medical Defense.

F. B. TIBBALS, Chairman.....Detroit
A. M. HUME.....Owosso
A. H. ROCKWELL.....Kalamazoo
W. J. DUBOIS.....Grand Rapids
A. W. HORNBOGEN.....Marquette

Meetings of County Medical Societies

The Secretary of the County Society will please notify at once the State Secretary of any change in the meetings of his County Society.

			Annual Meeting.
ALPENA	Monthly	Third Thursday	December, 19, 1907
ALCONA			
BARRY	Quarterly	Second Thursday, March, June, Sept., Dec	December 12, 1907
BAY			
ARENAC	Monthly	Second Monday (except July and August)	December, 9, 1907
IOSCO			
BENZIE	Quarterly	First Wednesday of March, June, September, December	Sept. 4, 1907
CASS	Quarterly	Last Thursday of March, June, Sept., Dec	December 26, 1907
CALHOUN	Quarterly	First Tuesday of March, June, Sept., Dec	December 3, 1907
BRANCH	Quarterly	First or second Tuesday of March, June, Sept., Dec.	December 10, 1907
BERRIEN	Quarterly	Last Thursday of March, June, Sept. and Dec	September 26, 1907
CHARLEVOIX			
ANTRIM			
CHEBOYGAN	Monthly	First Tuesday, weather permitting	January 7, 1907
CHIPPEWA	Monthly	First Tuesday	December 3, 1907
LUCE			
MACKINAC			
CLINTON	Monthly	First Thursday	October 3, 1907
DELTA	Monthly	Second Friday	December 13, 1907
DICKINSON-IRON	Bi-monthly	Second Tuesday of Feb., April, June, Aug., Oct., Dec.	Dec. 10, 1907
EATON	Quarterly	Last Thursday of January, April, July, October	October 31, 1907
EMMET	Monthly	Second Tuesday (except July, August and Sept.)	January 14, 1908
GENESEE	Quarterly	Fourth Tuesday of January, April, July, October	October 22, 1907
GOGEBIC	Monthly	First Tuesday	December 3, 1907
GRAND TRAVERSE	Monthly	First Wednesday	December 4, 1907
LEELANAW			
GRATIOT	Quarterly	Second Thursday of Feb., May, Aug., Nov	November 8, 1907
HILLSDALE	Quarterly	Last Friday of January, April, July, October	October 25, 1907
HOUGHTON			
BARAGA	Monthly	First Monday	September 2, 1907
KEWEENAW			
HURON	Quarterly	Second Monday of January, April, July, October	October 14, 1907
INGHAM	Bi-monthly	Second Thursday of Jan., March, May, July, Sept., Nov.	Nov. 14, 1907
IONIA	Quarterly	15th of Jan., April, July, October	October 15, 1907
ISABELLA	Quarterly	Last Thursday of January, April, July, October	October 31, 1907
CLARE			
JACKSON	Quarterly	First Thursday of March, June, Sept., Dec	December 5, 1907
KAL. ACAD. OF MED			
ALLEGAN	Monthly	Second Tuesday	December 10, 1907
KALAMAZOO			
VAN BUREN			
KENT	Semi-monthly	Second and Fourth Wednesdays (except July and Aug).	Dec. 11, 1907
LAPEER	Quarterly	Second Wednesday of January, April, July, October.	October 9, 1907
LENAWEE	Quarterly	Second Tuesday of Feb., April, June, Aug., Oct. and Dec.	Dec. 10, 1907
LIVINGSTON	Quarterly	Second Tuesday of March, June, Sept., Dec	September 10, 1907
MACOMB	Semi-annually	Second Thursday of May and October	
MANISTEE	Monthly	Last Tuesday	December 31, 1907
MARQUETTE	Monthly	Last Monday	December 20, 1907
ALGER			
MASON	Monthly	First Tuesday	October 1, 1907
MECOSTA	Quarterly	First Friday of January, April, July, October	October 4, 1907
MENOMINEE	Bi-monthly	Second Tuesday of Feb., April, June, Aug., Oct. and Dec.	Dec. 11, 1907
MIDLAND	Monthly	First Wednesday	December 19, 1907
MONROE	Quarterly	Third Thursday of January, April, July, October	October 3, 1907
MONTCALM	Quarterly	Second Thursday of January, April, July, October	October 3, 1907
MUSKEGON	Semi-monthly		December 6, 1907
OCEANA			
NEWAYGO	Quarterly	First Wednesday of January, April, July, October.	December 5, 1907
OAKLAND	Quarterly	Second Tuesday of March, June, Sept., Dec	September 10, 1907
O., M., C., O., R., O...	Monthly	Third Wednesday	December 19, 1907
OTSEGO			
MONTMORENCY			
CRAWFORD			
OSCODA			
ROSCOMMON			
OGEMAW			
OSCEOLA	Bi-monthly	First Wednesday of January, March, May, July, September and November	November 21, 1907
LAKE			
OTTAWA	Monthly	Second Tuesday	October 10, 1907
PRESQUE ISLE	Quarterly	First Wednesday of January, April, July, October	October 2, 1907
SAGINAW	Quarterly	First Tuesday of February, May, October, December.	October 1, 1907
SANILAC	Quarterly	First Monday in March, June, Sept., December	December 2, 1907
SCHOOLCRAFT	Quarterly	Last Wednesday of January, April, July, October	October 30, 1907
SHIAWASSEE	Monthly	First Tuesday	December 3, 1907
ST. CLAIR	Monthly	First Thursday	December 5, 1907
ST. JOSEPH	Quarterly	Second Thursday of April, June, Sept., Dec	December 10, 1907
TRI-COUNTY			
WEXFORD	Monthly	First Thursday	October 5, 1907
KALKASKA			
MISSAUKEE			
TUSCOLA	Quarterly	Second Monday of January, April, July, October	October 14, 1907
WASHTENAW	Quarterly	Second Wednesday of March, May, Oct., Dec	May 13, 1908
WAYNE	Weekly	Monday (except June, July and Aug)	May 19, 1908

OFFICE FOR RENT. A very desirable office in the Washington Arcade, Detroit, is for rent. Hot and cold water; extension telephone, compressed air; laboratory; sterilizer; services of stenographer. Address X, care of Journal.

CERTAIN as it is that a single acting cause can bring about any one of the several anomalies of menstruation, just so certain is it that a single remedial agent—if properly administered—can effect the relief of any one of those anomalies.

¶ The singular efficacy of Ergoapiol (Smith) in the various menstrual irregularities is manifestly due to its prompt and direct analgesic, antispasmodic and tonic action upon the entire female reproductive system.

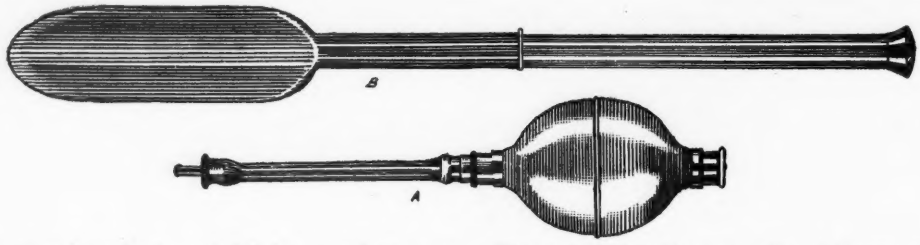
¶ Ergoapiol (Smith) is of special, indeed extraordinary, value in such menstrual irregularities as *amenorrhea, dysmenorrhea, menorrhagia* and *metrorrhagia.*

¶ The creators of the preparation, the Martin H. Smith Company, of New York, will send samples and exhaustive literature, post paid, to any member of the medical profession.

New Treatment of Chronic Constipation Without Cathartics

L. J. HIRSCHMANN, M. D.

A method of rectal massage and dilation of the sphincter which is very simple and which has been most successful. It consists in the introduction into the rectum and sigmoid of sausage-shaped pneumatic rubber dilators. These are dilated to conform to the shape of the rectum or sigmoid, by means of low compressed air pressure. This dilation is carried to a point where the patient feels a fullness and the dilator is alternately inflated and deflated and manipulated too and fro, so that the mucous lining of the bowel is stimulated and the circular muscular fibres contract and gradually regain their tone. Cases of chronic constipation of years' standing have been successfully treated and cured in from one week to two months' treatment, the longest case not requiring over twenty-



five treatments to establish a perfect cure. Normal defecation usually follows within a few hours after the first treatment. The average number of treatments need not exceed twelve or fifteen in the ordinary case.

The pneumatic dilators are mounted on a bougie, sizes French scale. These are attached by means of a cut-off valve, to the compressed air apparatus, at a low pressure, or used with bulb as shown in illustration, and are slowly expanded and allowed to empty themselves every fifteen or twenty seconds. These treatments do not last over five minutes at a time and are followed by good expulsive efforts.

Price, complete with bulb.....	$1.50	Price, without bulb.....	$1.25
Postage	.10	Postage	.06

Price of extra rubbers, each..... .25

MANUFACTURED EXCLUSIVELY BY

THE J. F. HARTZ COMPANY

DETROIT and TORONTO.

THE PHYSICIAN OF MANY YEARS' EXPERIENCE

KNOWS THAT, TO OBTAIN IMMEDIATE RESULTS

THERE IS NO REMEDY LIKE

SYR. HYPOPHOS. CO., FELLOWS.

MANY **Medical Journals** SPECIFICALLY MENTION THIS

PREPARATION AS BEING OF STERLING WORTH.

TRY IT, AND PROVE THESE FACTS.

SPECIAL NOTE.—Fellows' Syrup is never sold in bulk.

It can be obtained of chemists and pharmacists everywhere.